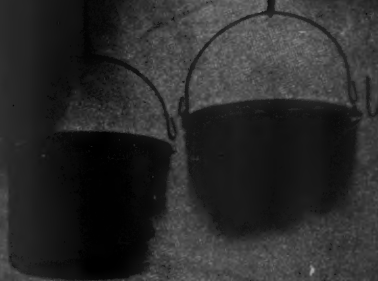


# American FORESTS



JUNE 1933



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# AMERICAN FORESTS

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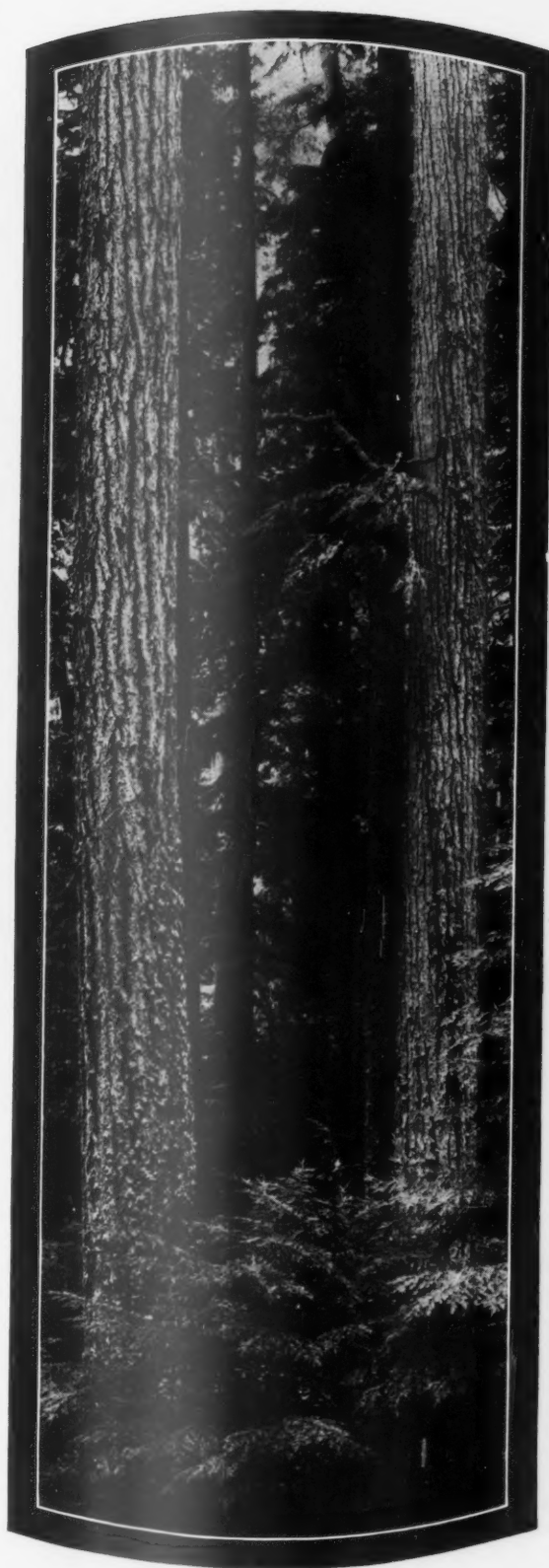
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Photograph by Gabriel Moulin.

*"As it fell upon a day,  
In the merry month of May,  
Sitting in the pleasant shade  
Which a grove of myrtles made,  
Beasts did leap, and birds did sing,  
Trees did grow, and plants did spring;  
Everything did banish moan,  
Save the nightingale alone . . ."*

*—Shakespeare.*

The stage of the Family Club Theatre, near Woodside, California, perfectly exemplifies the beauty of a natural setting among the redwoods. Note the use of logs in the formation of the orchestra pit.



# AMERICAN FORESTS

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No. 6

## FOREST THEATRES

By EMERSON KNIGHT

"Are not these woods  
More free from peril than the envious court?"

THE forest theatre is essentially one of informal character. The factors involved in its design, development and use should be akin to those observed in relation to preserving the inherent beauty of the national and state parks and forests. While man must conceive and give form and convenient pleasing use to such open-air pleasure places, the touch of his hand, that of the landscape architect, should be as little evident as possible. He must work in Nature's mood of seeming freedom, simplicity, quietness and repose.

When construction is necessary it should be in key with the setting, sturdy and durable, yet unobtrusive. The treatment and surroundings will logically determine whether it is most ideally adapted for the drama, pageant, masque, opera, or dance productions.

Happily suited to the atmosphere of the forest are such dramas and pageants as deal with life in the woods. Sagas and old ballads, songs, legends, myths, fairy tales and folklore form but fragments of

rich and inexhaustible material. The entire gamut of the dance, from its primitive, free and most spontaneous forms, to its sublime expressions of abandon, grace, tranquillity, fiery passion, or spiritual essence will here be released for the fullest interpretation. Because its mute character in no wise does violence to the inmost hush of the forest, it might even rise to a loftier eloquence than that of the speaking or singing voice. If there is no just need for a man-devised stage, the gently undulating leaf-strewn space enclosed by

the boles of mammoth trees will amply serve in its natural state. The secluded atmosphere, pristine qualities and sylvan beauty of such a theatre should invite Pan, the dryads, fairies, fauns and wood nymphs to hold revel there even when mere man might be absent.

The forest lends itself with singular felicity as a setting for the enactment of the drama and pageants. Whether in a natural open, hollowed space near the margin or among the



Photograph by Russell Angel.

*"Aerial pines from loftier steeps ascend,  
Nor stop but where Creation seems to end."  
—Wordsworth.*

The Mountain Play, "Rob Roy" given in  
1932 at the Mountain Theatre on Mount  
Tamalpais, California.



Photograph by Gabriel Moulin.

*"At every impulse of the moving breeze,  
The fir grove murmurs with a sea-like sound."  
—Wordsworth.*

The Bohemian Grove Theatre in 1923, showing seating, lower stage levels and setting of redwood giants. This, and the view on the following page, are used by special permission of, and all rights reserved to, the Bohemian Club.

deeper recesses of vast trees, such subtle qualities as needle pungency, mystery, shifting lights and shadows, or a profound silence interpolated only by bird song, serve but to heighten or intensify the inherent force of the drama. The

auditorium; and finally the art of Aeschylus and Sophocles and Euripides flowered in the beautiful architectural theatres of Athens, at first of wood, and then developing into stone bowls, immense in size" and approaching perfection in pro-

measured dance and the sung or spoken word seem to be complemented by the elements in perfect consummation. Each moves rhythmically, spontaneously toward the culmination of pure beauty that leaves its lasting impression upon all sensitive beings.

Man's devotion to trees and his worship of trees and tree spirits or gods in groves, has been traced among widely varying peoples of Europe, Asia, Africa and the Americas, and reaches back into a past so remote that there is no accurate record of the beginnings. In the history of the religions of India is found reference to the "Joyful tender Idyll of the groves of Vrindavan" in a period of the Aryan race many centuries, perhaps two thousand years, before the Christian era.

Among the Greeks, the god Dionysus, or Bacchus, to whom sacrifices were made in groves, was not only the god of the grape vine, but also of the pine tree and the fig, the ivy and indeed of all cultivated trees and crops. "In Greece the drama was born in the dances about an altar, during the festivals of the god Dionysus; it grew on the platforms erected at the side of the 'orchestra,' or dancing-circle, at first in the marketplace, perhaps, and later at the foot of a hillside that formed a natural

portion and decoration. In the Roman Empire the traditions of Greece were carried on with certain modifications and further elaboration of ornament in the theatre and amphitheatre of stone. Druidism also prevailed in Roman times in sacred groves of oak crowned with the mistletoe or golden bough. The Druids thus worshipped in Italy and Gaul, while in Greece they used groves of cypress. Those of the Celtic race continued their rites among the trees for centuries, in Brittany, Wales, Ireland and the Highlands of Scotland.

"The drama was reborn in the tenth and eleventh centuries within the church, but as soon as it became more than a mere incident of religious service it again sought the out-of-doors. At first the Mystery plays were acted on the church steps and platforms. Then on platform stages the more elaborate Miracle plays were acted, with realistic representations of Hell, Paradise, and other Biblical localities. Finally the platform in an inn courtyard and the popular 'bear-ring' established the type of playhouse for the early Elizabethan period, and when the genius of Marlowe and Shakespeare blossomed, the theatre stage and pit were still open to the sky, though the galleries were roofed. The Passion Play Theatre at Oberammergau is the only impor-

tant contemporary survival of the medieval religious theatre."

Simultaneously with the early Shakespearean theatre the garden theatre of the Renaissance flowered in Italy. Their conception and design was usually architectural and formal, yet turf and either natural or planted trees and shrubs were skillfully employed to lend them an atmosphere of intimacy, dignity and elegance. The occasional later use of these theatres together with spectacular or traditional events held at rare intervals in the old Roman theatres and arenas of south France and Italy, served to carry on the thread of the story of open-air theatres from those times down to the beginning of the twentieth century. Then there dawned a new interest in the use of the forest and other outdoor settings for the pageant and drama, a modern renaissance expressing highly significant development and exerting wide influence.

Forest theatres developed especially for the drama and pageant are to be found in Denmark, France, Germany, Switzerland and other European countries, as well as in the eastern United States, the Middle West and along the Pacific Coast, especially in California. Their sites, plans and general character vary widely. While similar advantages are



Photograph by Gabriel Moulin.

*"To him who in the love of Nature holds  
Communion with her visible forms, she speaks  
A various language."*  
—Bryant.

One of the beautiful and inspiring pageants of the Grove Play of 1931 at the Bohemian Grove, near Monte Rio, California.



embodied in all, milder conditions of climate make possible the use of such open-air pleasure places over far more days and nights each year in the Southwest than elsewhere.

Although forest topography includes infinite physical variations, outdoor theatres positioned among trees may conveniently be mentioned under four major groups of similar importance. First is the elevated amphitheatre, natural in its contour form, of which the Mountain Theatre, some two thousand feet above sea level on Mt. Tamalpais in California, furnishes a striking example. It is enframed by Douglas firs, live and tan oaks, laurels and madrones, and commands a superb, far flung back stage panorama of the mountain ridges below, San Francisco Bay and its clustering hill cities and towns. Second is the comparatively level mid-forest type wherein the trees encompass both the stage and the audience. The Forest Theatre hidden among the Monterey pines at Carmel, and the Family Club Theatre in a redwood grove near Woodside, both of California, are excellent illustrations. A less formal variation of this type is the camp fire center, usually accompanied by a small stage, the seats often being hewn from huge logs and arranged about the fire pit in the form of a half circle or horse shoe. Examples of this are to be seen at Big Basin in California Redwood Park, at the Bohemian Grove and at the Family Club Farm, the two latter being entirely independent of their theatres proper. Such camp fire centers are frequently used in a community spirit and for the activities of such groups as Boy and Girl Scouts and Camp Fire Girls.

Third, is the theatre with a level or very gently sloping seating area facing a single stage or a series of stages built upon rising forest slopes. The most widely known and unique one is the Bohemian Grove Theatre, near Monte Rio, California, where superb productions have been given annually since 1902. Two redwood giants form the proscenium arch while many more trees of this colossal family serve to compose a picture impressive with nobility of scale. Fourth is the type wherein the audience, preferably on sloping ground, faces the stage situated close to a creek or river, a lake, or the ocean, the water and pleasant landscape beyond forming the natural stage back-curtain. A distant variation of this form is the Water Theatre, wherein a strip of land with trees as a background forms the stage proper, while a broad sheet of water in the form of a lake, lagoon,

or quiet stream intervenes between the audience and ground stage. Then the water itself virtually becomes the principal stage providing an ideal setting for all manner of aquatic scenes and effects. Such a theatre is singularly adapted for pageants and spectacles on a grand scale, and should justify a large seating capacity if adjacent to a metropolitan area.

There are few worthy theatres belonging strictly to this fourth group in the West, yet the Greek Theatre at Point Loma, near San Diego, planted artificially, and the Woodland Theatre of Hillsborough, with its stage built across a creek dry in summer, suggest the interesting possibilities.

In addition to these principal types there should be included private or garden theatres which may be situated in private forests and conceived under any or all of the topographical conditions outlined, and developed in an intimate and charming manner. When considering all of the true forest theatres thus far matured in

America, the Bohemian Grove Theatre, in California, and the Pageant Theatre of Peterborough, New Hampshire, are among the finest examples.

In order to retain quiet forest atmosphere and feeling, stage properties and architectural elements should be rarely utilized and then only with due restraint. It is desirable that the whole finished effect shall seem integral with the primeval groves. The wings and approaches might be carefully devised and sometimes concealed by the introduction and studied shape control of native shrubbery and small trees, forming dense screen hedges. An orchestra pit may prove necessary but this can be depressed and partially hidden by the use of massive logs, retaining their bark whenever practicable. The seating may be built of hewn or plain round logs, or heavy slabs of wood, boldly and simply supported. The retention of a few native or specimen trees within the auditorium will relieve stiffness and enhance the effect due to their accidental charm. Log seats at the Bohemian Grove Theatre are bored with holes to receive metal rods in pairs, between which are stretched broad canvas bands comprising back rests.

Lighting is a most vital factor when outdoor theatres are intended for night as well as day performances. Great pains should be taken to conceal conduits, wires, all light sources and reflectors. Garish colors and effects, including intense flood lighting and severe spot lighting should be avoided. The finest treatment (Continuing on page 285)



*"One impulse from a vernal wood  
May teach you more of man,  
Of moral evil and of good,  
Than all the sages can."  
—Wordsworth.*

The recreation center and stage, with tables set for luncheon, at the Family Club, among the redwoods—"open to any pilgrim's feet."





Twenty-six million acres draining into the Tennessee River intimately affects the welfare of seven states. Redemption of the river's usefulness for power and commerce, and stability of the region's agriculture and industry depend, like the river itself, upon the condition of the forest cover on some twenty million acres of its mountainous watershed.

## TREES -- REDEEMERS OF THE TENNESSEE

"THEIR ROOTS ARE THE NURSES OF RIVERS IN BIRTH"

By G. H. COLLINGWOOD

**E**NACTMENT of the Muscle Shoals bill promises to put the Federal Government into the business of producing and distributing electric power, together with nitrates for fertilizers and explosives for industry or war. Government owned and constructed transmission lines carrying government produced power may radiate from the Wilson Dam at Muscle Shoals and from a dam to be constructed on Cove Creek some 350 miles farther up the Tennessee River. New industries may be established, new cities spring up, and business throb where now is forest and farm. The average citizen reads of the plans, takes for granted the natural resources behind this potential force, and hopes the competition for power markets will reduce his monthly electric bill. But from the time President Roosevelt outlined his dream of the Valley to a group of newspapermen at Warm Springs, Georgia, he has seen the Muscle Shoals development as only a small part of the potential public usefulness of the entire Tennessee River.

In his message of April 10, he said, "Such use, if envisioned in its entirety, transcends mere power development; it enters the wide fields of flood control, soil erosion, afforestation, elimination from agricultural use of marginal lands, and distribution and diversification of industry. In short, this power development of war days leads logically to national planning for a complete river watershed involving many States and the future lives and welfare of millions. It touches and gives life to all forms of human concerns."

How Federally produced power will affect investments of

millions of dollars was discussed in the halls of Congress, but plans for the use of nearly 26,000,000 acres of land protecting the river from which this power is derived were only mentioned. There were also a few who spoke of the social and economic effects upon some two million people who live in the Valley. But the close relation between the use of the land for agriculture, forestry and recreation, and the permanent success of the Tennessee Valley program is yet to be fully realized.

Over one hundred years ago when James Monroe was President, the possibilities within the Valley were recognized, but our part in the Great War was required to bring about even their partial realization. Since the close of the war the investment of \$150,000,000 at Florence, Alabama, has remained largely idle.

As a potential source of hydro-electric power, the Tennessee River ranks with the Columbia, the Colorado, and the Niagara Rivers. Moreover, its 640 miles of navigable water which link Knoxville with the Ohio place it among the great commercial arteries of the continent. Representative Will Taylor of Tennessee had this in mind when he said that power is of secondary importance. "Navigation is the primary and paramount objective; power follows, and flood control is a very important element!"

The waters of the Tennessee rise in the rough, mountainous country of the Cumberland Plateau in Tennessee and Virginia and the rougher Blue Ridge Mountains of Eastern Tennessee, North Carolina, and Georgia. In the Blue Ridge

are more than forty peaks with elevations of 6,000 feet or over, topped by Mount Mitchell with a total height of 6,684 feet above sea level.

Between the Blue Ridge and the Cumberland Plateau lies the rolling country of the Appalachian Valley with elevations ranging from 700 to 1,600 feet. The Tennessee River gains volume in this fertile valley, pushes through the Highland Rim in Tennessee into the hilly country of northern Alabama, and touching Mississippi, proceeds back through Tennessee and Kentucky to enter the Ohio River a few miles below the mouth of the Cumberland River. Thus the Tennessee affects the welfare of seven great states and rivals the Ohio in whose waters it loses its identity.

The increasing cost of dredging the channel, the disastrous floods and the long periods of low water have revealed their causes in thoughtless human practices. Thinking only of their own welfare, thousands of mountain farmers have attempted to grow crops on steep slopes of submarginal agricultural value. After a few years of superficial cropping the fertile top soil washes down into the stream beds, silts up the river and clogs the channel. As the loose mulch and forest litter disappear the pores of the surface soil become sealed. The rain water no longer penetrates to sub-surface channels to seep out as springs and feed the watercourses. Instead it dashes off in small torrents, carrying surface soil and debris. Meanwhile, the agricultural efforts are transferred to another area, leaving the former field to unchecked erosion, brush and weeds. This is multiplied a thousand fold and the disastrous results to the river valley are cumulative. Within the basin are over a million acres of such worn out, abandoned marginal lands, and their number increases.

These attempts to cultivate land unsuited for agriculture, combined with uncontrolled fire, timber cutting and excessive grazing of domestic stock, have aggravated the evils of erosion and reduced the water holding capacity of the soil. Such action is bad enough under any circumstances, but is aggravated in the region of the Tennessee where the soil is loose, and the rainfall from forty to eighty inches a year, with records of over 100 inches in the upper areas of the Great Smoky Mountains. The combined losses of soil fertility are sufficient to warrant statements from the Department of Agriculture that farmers in the region lose as much as \$35,000,000 a year.

This cumulative loss of soil fertility combined with a declining lumber industry makes one marvel at the resistance of the country and its people. Since 1909 when lumber production reached its peak in Tennessee the cut has declined from 1,225,892,000 board feet to 530,300,000 board feet in 1928. Perhaps of greater significance is the fact that there were 2,643 sawmills operating and employing local labor in 1909 as compared with 505 in 1928. This has thrown thousands of wage earners out of employment, has caused hundreds of thriving communities to be abandoned and has deprived farmers of a cash market for their logs, poles, ties and other forest products. The last is another example of the close relationship of farming with forestry.

The realization that the usefulness of streams for producing power and carrying commerce depends upon the condition of the forest cover on watersheds resulted in the establishment of State departments of forestry and in the Government assuming responsibility for rehabilitating the forests and the navigability of the streams. The passage of the Weeks Act in 1911 led to the creation of Pisgah National Forest among the mountains and valleys around Asheville, North Carolina. Simultaneously the Unaka and Nantahala National Forests were created and a few months later the Cherokee National Forest. Since then 822,000 acres drain-

ing into the Tennessee River have been acquired and placed in five National Forests. In addition, 427,000 acres are being assembled on the Tennessee and North Carolina boundary to form the Great Smoky Mountain National Park. Georgia and North Carolina have 40,000 acres in city watersheds, State forests and parks, and 56,000 acres in the Cherokee Indian Reservation under federal control in North Carolina. The total is 1,345,000 acres, or scarcely one acre out of every twenty in the Basin.

Twenty years of planned administration of some of these lands is demonstrating the value of forest protection and development. With control of forest fires, new tree growth has been established and in many cases the rate of growth and quality of timber has improved. Destructive cutting has been stopped, agricultural efforts are confined to the more desirable locations and soil types, live stock grazing is restricted to areas where torrential run-off and heavy erosion need not follow, and the assured beauty of the areas is bringing in new investors and pleasure-seekers.

To solve the problem of keeping the river channel clear and to protect the reservoirs behind the dams from filling up with silt, 5,000,000 to 10,000,000 acres of the steeper slopes should be given rigid protection as is possible only under public ownership. To this should be added support and encouragement of the efforts of the several State Foresters to protect the remaining forest land. Nearly 25,000,000 acres are now in private ownership, of which about two-thirds or nearly 17,000,000 acres is in farm ownership, comprising about 9,000,000 acres of tillable land, nearly 6,000,000 acres woodland and the rest in pasture. On nine out of every ten acres, private interest is dominant. Approximately 6,000,000 acres are so fertile as to be included in any permanent agricultural plan. The states may acquire close to a million acres for state forests and parks.

While the critical parts of the entire watershed might be adequately protected through the police powers of the several States, their enforcement carries possibilities of friction. More uniform administration can be accomplished through Federal ownership of the lands. Fortunately, the Weeks Act, as expanded under the Clarke-McNary Act of 1924, furnishes the necessary legislation for acquiring these lands. The agency for land purchases is the National Forest Reservation Commission, and the Forest Service the logical administrator. Adequate appropriations are now lacking, but that these may be forthcoming as the need becomes apparent is encouraged by the recently enacted law creating the Tennessee Valley Authority. One section authorizes the President to recommend legislation for bringing about flood control, improving navigation on the river, developing the use of marginal lands and to reforest lands within the basin. Assistance and advice from any of the government departments in carrying out these recommendations is also authorized.

There is no comparable legislation to encourage any of the states to increase their holdings so that action along this line may be slow. A million acres of state and municipally-owned land presents a big task, and were it accomplished there would still be need for a large Federal program.

Ultimately Federal forest ownership within the Tennessee drainage basin may be expanded to 5,000,000 acres or more. On the basis of previous expenditures for similar land, 4,000,000 acres could be added to the present area in Federal ownership for about \$20,000,000, and the present area in National Forests could be expanded 7,000,000 acres for another \$10,000,000. This would include the more critical parts of the watershed and would furnish insurance for investments in dams and power equipment variously estimated

with a minimum of \$500,000,000. The purchase money would be used to compensate present owners of land who would frequently remain in the region to secure a living from the resulting activities. Cheap power is expected to start the wheels of industry and the flow of wages for miles around. With these will come higher standards of living with increased demands for farm products and manufactures. Meanwhile, with improved protection of the watershed forests, employment can be furnished many who would keep their homes in the hills.

Management of the National Forests must be supplemented by added fire protection on the privately owned land and by improved management of the forest. Already State appropriations and individual allotments have been accelerated by Federal funds to permit State Foresters to establish forest protective systems which are steadily reducing the fire damage. The work is good, but more needs to be done.

these mountain mills and whistles echo through the valleys, farm boys will know that paying jobs await them and there will be a market for the products of the farm woods. Wagons loaded with logs or railroad ties wending their way to



Thousands of mountain farmers who have attempted to grow crops on steep slopes of sub-marginal agricultural value have seen their land wash away and their homesteads endangered by erosion.



The Tennessee River, rising in rough country, flows for nearly half its course through rich agricultural lands of the Appalachian Valley between the Blue Ridge and the Cumberland Plateau.

Similarly a few large timberland owners and a scattering of farm woodland owners are applying forestry principles to their holdings. The combination of protection and management applied to the forest land of the Valley can readily produce 1,500,000,000 board feet of timber a year, which is more than was cut in Tennessee during 1909. This is at the average rate of 115 board feet of yearly growth on each of the 13,000,000 acres suited to forest. Under intensive management this might be increased by another 800,000,000 board feet to approximately 2,300,000,000 board feet. With the assurance that these forest crops can be repeated year after year, new wood-using industries will be set up, and old ones will be re-established. When wheels again turn in

the mill will again be familiar sights. Cash from these products of the forest will buy clothing and repair the farm buildings, and steadily the machinery of exchange will get under way to re-establish prosperity in the region and to spread into the surrounding country.

There are those who call this a dream, but there is hope in the hearts of millions of Americans that President Roosevelt's dream of the Tennessee Valley will materialize into the force that will not only help to pull this country out of the depression but will protect it against future depressions. If it does, forestry will be established on a scale comparable to the dreams of the conservation leaders who started their work with the beginning of the century.





## THE ROOSEVELT FORESTRY SONG

Dedicated to President Franklin D. Roosevelt, by J. O. (Hap) Hazard,  
State Forester of Tennessee

Foresters, My Foresters, just hear that Reveille,  
Our President is saying we can practice Forestry.  
Now ain't it grand that we can help in this emergency,  
F o R e s t. (Chorus.)

*Chorus:*

So, give a Rousing Cheer for Roosevelt,  
Give a Ripping Cheer for Roosevelt,  
Give a Royal Cheer for Roosevelt,  
Now, Who-o-o-o-pee. (Repeat.)

Franklin says our Timber once was fine as it could be,  
When his Daddy was a boy it was a sight to see,  
But we've cut and burned and wasted it, Oh, most disgracefully,  
F o R e s t. (Chorus.)

He says our Forests helped to put the Railroads to the fore,  
And now they're gone the Railroads dear just miss them more and more,  
Unless we grow some Trees for them they can't run as before,  
F o R e s t. (Chorus.)

He says the Rivers used to run with regularity,  
Till the ruin of the Forests spoiled their great tranquility,  
By planting trees we'll teach them not too wet nor dry to be,  
F o R e s t. (Chorus.)

Our Rivers with our Forests gone just act the very fool,  
They rave and rant and drown us or they just reverse the rule,  
But with our Forests once restored they'll stay contained and cool,  
F o R e s t. (Chorus.)

In days of yore our Forest streams were full of Speckled Trout,  
But if you want to catch them now, you first must turn them out  
And plant green Trees to shade the Pools they love to sport about,  
F o R e s t. (Chorus.)

Coming generations sure will need a lot of Wood,  
So if we want to help them we should do just what we should,  
And use no more than Nature grows because it is not good,  
F o R e s t. (Chorus.)

Right well you know that boys and girls should have a chance to see,  
The wonders of the Woodland and the magic of the Tree,  
To love the Birds and Animals and to respect the Bee,  
F o R e s t. (Chorus.)

Let each of us poor mortals on some heated summer day  
Go seek the Forest coolness where the Squirrels love to play,  
Until the cool of evening bids us be upon our way,  
F o R e s t. (Chorus.)

Foresters, My Foresters, just hear that Reveille,  
Our President is saying we can practice Forestry.  
Now ain't it grand that we can help in this emergency,  
F o R e s t. (Chorus.)

(To be sung to the tune of "The Battle Hymn of the Republic")

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# "ROOSEVELT" - - FOREST CAMP NO.1

In the Mountains of Virginia Recruits of the Civilian Conservation Corps  
Establish the Nation's First Camp for Building Men and Forests

By ERLE KAUFFMAN

With Photographs by the Author



YOUNG John W. Ripley, of Washington, D. C., poised on the uppermost branch of a solitary pine, his throbbing pulse beating a wild tattoo. The slender tree bowed menacingly under his weight but the threat went unheeded. Ripley was oblivious to all save triumph. He had made the pre-

carious climb under the sting of good-natured "razzing" from his companions, now grouped on the ground thirty-five feet below; and all sense of danger yielded to the human urge to flaunt the banner of success in their upturned faces.

He grinned down at them, two platoons of young men clad in the fatigue uniform of the Army. There was nothing trim about them; in fact, they wore their ill-fitting regalia with an abandon that was genuine. Their faces, reddened somewhat by the sun, still showed traces of a weariness and hardship that only poverty and discouragement know. But there was spirit, a reborn spirit, that comes of occupation, of wholesome food, of cleanliness, of sunshine, of surroundings of natural beauty.

Somewhat apart stood the military figures of Army officers. Spread out behind them were two "streets" of tents. To the right a red cross ruffled lazily over a field hospital. Beyond, the blue tips of

distant mountain peaks gave poetry to the setting. After viewing all of this, young Ripley produced a rope and a short-handled ax. With painfully awkward strokes he topped the slender pine, attached his rope, and began to lop off the branches. Downward he worked, so heedless of danger that voices of the more experienced occasionally boomed up words of warning from the ground. Soon the young pine tree stood straight and bare.

Soldiers stepped forward with a flag, eager hands from the ranks of the civilians reached for the rope, and Old Glory was sent aloft to be whipped by the breeze over Camp Roosevelt, the first forest work camp of the Civilian Conservation Corps.

When Ripley signed up with the Corps in the National Capital he little dreamed of the part he would play in raising the first camp flag. With two hundred other young men he had gone down the Potomac River for "conditioning" at historic Fort Washington with no other thought than at last here was relief from idleness, an opportunity to work and to earn money. Even on that memorable day of April 17 while huge busses were conveying him and his fellow civilian foresters to the chosen site in the George Washington National Forest, near Luray, Virginia, his imagination failed to conjure up the scene which was soon to follow.

Arriving at Camp Roosevelt, or the spot where it was to arise, in the small hours of the morning, tired, hungry and in some cases disillusioned, the Corps was greeted with a torrential rain. A foresighted Army supply sergeant produced rubber

boots while a brother officer ordered a field kitchen set up. But there was no sleep. Warmed by the food the new civilian army huddled around the huge stove. An eighteen year old rookie broke into a song, only to be howled down. The song started again, this time to be drowned out by a fresh downpour of



A "squad" at Camp Roosevelt—vanguards of the new civilian Army which will take up arms to restore the forest glory that was once America.

rain—and more howls. It looked like a bad night for the vanguards of President Roosevelt's vast army of civilian foresters—until First Sergeant R. H. Nesbitt swung into action.

Good-natured, understanding, and with eyes that twinkled at the slightest provocation, this veteran of twenty-seven years of Army service fastened his slicker collar well up

ated hands without complaint. Although generally uninformed about many matters pertaining to the Corps and its objectives, one thing they knew well. The quicker the camp was completed the sooner would come those comforts and conveniences for which they yearned. They knew too, if vaguely, that the eyes of the nation were upon them, that the

outcome of their efforts would resound in every community. Hardly a day passed but came photographers, reporters, writers and an endless stream of officials to inspect them, to photograph them, and to write about their work and their lives. Even the "talkies" pushed up the mountain and put them through their paces.

As one red-haired youngster put it: "Believe it or not, mister, I went all the way to Hollywood to get before a camera. They couldn't see me for a row of jelly beans. Now I've joined up with the C. C. C. and they come all the way up here to get my picture. Ain't it funny?"

"Yeah?" responded a more sophisticated companion, breaking rock on a platoon "street" nearby. "You might've stayed down in the city and had your fingerprints taken. That wouldn't have been so funny."



A platoon "street" of the tent city. In three days the civilian foresters drove tortured muscles and blistered hands to floor and erect forty Army squad tents—their living quarters.

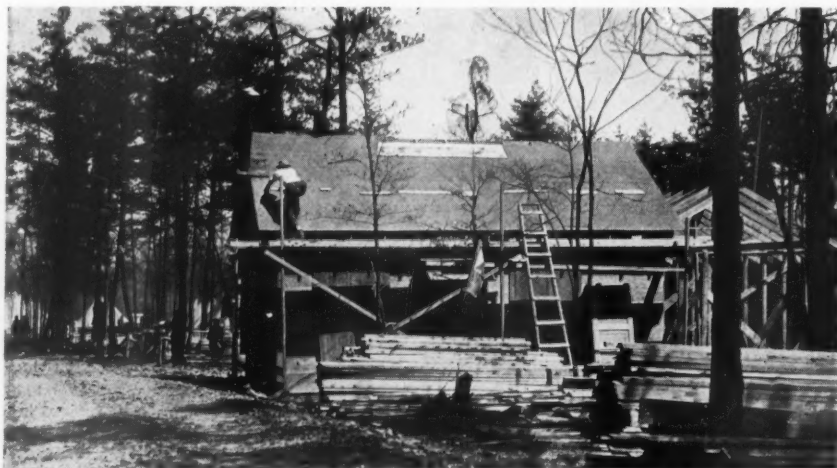
around his neck, stuck a whistle between his teeth, and let out a resounding blast. "Listen, men!" he shouted in an experienced voice, when the din had died away. "You've had plenty to eat, that stove is red hot, and your feet are dry. Quit crabbin'!"

"But what about the rain?" one of the civilians wanted to know.

"Even the Army can't stop that!" was the quick reply.

Someone laughed, others quickly joined. Immediately there was a song.

The Corps is still talking about that night—but only as a matter of reminiscence. Sergeant Nesbitt's whistle began to blast again early the following morning, and with each blast Camp Roosevelt came nearer to what it was intended to be, a model forest work camp for the Civilian Conservation Corps. Drainage ditches were dug, trees were felled, and crushed rock appeared in the "streets" where once was mud. Tents arose as if by magic. In three days these youngsters, a majority of whom were not yet of voting age, drove tortured muscles and blistered hands to floor and erect forty Army squad tents. They constructed a tool house and started work on a combination kitchen, dining room, storeroom and recreation hall. There was not a handful of experienced carpenters among them, but they went after hammer and square with vigor and purpose, nursing bruised thumbs and lacer-



During the same three days they constructed a tool house and started work on a combination kitchen, mess hall and storeroom. There were not half a dozen experienced carpenters among them, but they went after hammer and square with vigor and purpose.

Those first "rubber boot" days in the camp were of the "make or break" variety for the erstwhile unemployed youths. As Top Sergeant Nesbitt put it, they "separated the men from the boys." Four decided they had had enough and set out down the winding mountain road for greener fields. There were none in sight. A kindly police officer in

Building men at Camp Roosevelt. With the exception of military training and rigid discipline the civilian foresters live under Army routine. To the right a platoon is shown answering mess call. Each man consumes a pound of meat per meal, along with vegetables, bread and coffee. In the short time they have been in camp many of the youths have gained as much as fifteen pounds.



Getting the latest news from home—and from headquarters. The camp bulletin board.



The "daddy" to every youth in camp, First Sergeant R. H. Nesbitt, a veteran of twenty-seven years of Army service.



Soap and water are the order of the day at Camp Roosevelt. A pre-mess call routine.



Next to the mess call, distribution of camp mail is the most popular event in the lives of the Civilian Conservation Corps, just as letter writing is one of the chief camp activities when the day's work is done. The men are allowed to go home over week ends if means of transportation are available, and may receive visitors at designated hours.



Luray could not assist them, but offered to take them back to camp. Today these four are the mainsprings of the camp. Later four others were seized with the same longing and turned their faces toward the horizon. "A. W. O. L.," the Sergeant wrote in his book, and slipped their discharges into the camp mailbox.

"Four out of two hundred," Sergeant Nesbitt mused, "is not so bad. Several more are scheduled to leave—by request. They are the trouble makers. We know who they are and they have been given every chance to make good. When we get rid of them this will be the finest camp in the country."

And the jovial Top Kick should know. He is the daddy, the granddaddy, and the father confessor to every youth in camp. He gives them their orders, sees that they are well fed, housed and clothed, and looks out for their needs in general. Furthermore, he solves their individual problems with judiciousness and candor.

He is all over the camp, sympathizing, advising, instructing—and driving. For the Sergeant believes in work. "Keep your men busy and healthy," he said, "and you have what we of the Army call morale."

Although there has been some public misunderstanding as to the part the Army is playing in this great national movement to build men and forests, the boys in Camp Roosevelt have come to know very definitely its function. They will tell you in their own words that the Army's job is to build men, and that the forester's job is to build forests. They let it go at that.

The Army built Camp Roosevelt and is maintaining it. Under command of Captain Leo Donovan, a full company of soldiers from Fort Washington is stationed there. There are three other officers—Lieutenant W. F. Train, construction officer and second in command; Lieutenant R. B. Carhart, supply officer; and Lieutenant M. J. Kossow, medical officer. There is a full company quota of non-commissioned officers, headed by First Sergeant Nesbitt. The enlisted men and a number of the non-commissioned officers will not remain at the camp. Their function of working with the young civilians until they have become adept in the many phases of camp life will soon cease.



Part of the process of making Camp Roosevelt a "model" camp. Utilizing ax, rake and fire, the men have cleaned up a large area surrounding it, and encircled it with a "fire break." And they go at the job like veterans.



Building forests. There are nearly fifty thousand acres of young timber in need of improvement on the George Washington National Forest. Above, one of the forest recruits is shown swinging an ax on the initial project.

With the exception of military training and rigid discipline the civilian foresters live under Army routine. They roll out of their blankets at 6 a.m., answer roll call at 6:15, the breakfast call at 6:30, and are ready for work at 7:30. Dinner call comes at noon, with a half hour to "wash up." They are ready for work again at 1 p. m., returning to camp at 4:30. Supper call comes at 5:15.

There is no curfew at Camp Roosevelt. After supper the men are free to do as they like and for as long as they like. The only requirement is that they be on hand for the roll call the following morning. Every Saturday morning at nine o'clock there is a general camp inspection. Tents and equipment are examined by the camp commander, and the bodies of the men fall under the watchful eye of the camp medical officer. The boys are required to take a bath daily.

In military fashion the men are divided into two platoons of one hundred men each in "command" of Army sergeants. Each platoon has its own "street" and its own organization. Rivalry is keen, and the glory of one platoon is the agony of the other.

Although actual forestry work has not started at Camp Roosevelt, except in the way of training in the use of the ax, rake, shovel, pick and other necessary implements, the men will be under the direction of National Forest officers from 7:30 to 11:30 a.m. and from 1 to 4:30 p.m. Under the present plan there will be no official work on Saturday and Sunday.

After a hearty breakfast of eggs, potatoes, coffee, bacon or sausage, the young civilians are lined up for their orders. Carpenters over here, painters over there, and clean-up gangs fall out! Army regulars are detailed to each group for the purpose of "showing the boys how." A great majority of the men are anxious to learn and give serious attention to the work at hand. Sergeant Nesbitt is everywhere, and the blast of his whistle never dims.

He stops for a moment with a group clearing and burning on the outskirts of the camp.

"How're we doing, Sergeant?" a youngster asks with a grin.

"Too much fire here," he responds quickly. "Kick it down. And if the wind comes up get it out—and I mean out!"

There is a group sawing lumber for the new mess hall. He notices a blood stained handkerchief around the finger of one of the men.

(Continuing on page 270)



# TRAILS OF THE WILD



## Members Endorse "Trail Riders of the National Forests"

"THE greatest travel opportunity I have ever known," is the way a famous traveler and educator summed up The American Forestry Association's Trail Riders of the National Forests. "I have paid ten times the price for half as much."

That is the spirit with which this opportunity to ride into two of America's greatest forest wildernesses has been accepted by knowing and thinking people. For never before has the public been invited to explore a country known only to a few native woodsmen and rangers under the leadership of such organizations as The American Forestry Association and the United States Forest Service. To insure the best travel conveniences the Northern Pacific Railroad is also cooperating.

The first trip, starting July 10, will be into the wild South Fork region of the Flathead National Forest, in Montana. The cost, reduced to actual expenses, will be about seven dollars a day, or \$43.75 complete from Missoula back to Missoula. Six days will be spent in "boots and saddle." The second ride of the Trail Riders, into the Sun River wilderness of the Lewis and Clark National Forest, also in Montana, will be for five days, at a cost of approximately eleven dollars a day, or \$54.75 complete from Helena back to Helena. This trip will get under way August 16.

Reduced railroad rates to both Missoula and Helena will be in force during the time of both trips. These rates, supplied by the Northern Pacific Railroad, are set forth in the box on this page.

"It is a conservation proposition for genuine open air recreation, information and education direct from the

heart of Nature," writes Jewell Mayes, secretary of the Missouri Department of Agriculture. Austin F. Hawes, state forester of Connecticut, looks upon the Trail Riders as "the kind of project which I have long thought ought to be done and believe The American Forestry Association has made a good move in taking it up."

"I intend to take my family of five on both trips," writes a member from Mas-

sachusetts. From Missouri: "At last here is a trip that should appeal to every red-blooded American and at a cost that is within their reach." A member from Pennsylvania is "sending his boy and girl, who are now in college," while in California two young ladies "are looking forward to a life long ambition to explore a real wilderness."

The ranks of the Trail Riders are filling. If you have not made your reservations do not delay. As a member you are not required to make an immediate deposit. Just tell us to reserve a place for you. But act now.

### RAILROAD RATES FROM KEY CITIES

	HELENA		MISSOULA	
	Summer Excursion	Special 45 days	Summer Excursion	Special 45 days
Baltimore	\$103.55	\$93.83	\$107.20	\$97.48
Boston	118.50	104.99	122.15	108.54
Buffalo	89.20	82.60	92.85	-----
Chicago	61.95	-----	65.65	-----
Cleveland	78.72	-----	82.37	-----
Philadelphia	106.24	95.93	109.89	99.58
Pittsburgh	86.11	80.20	89.76	83.85
St. Louis	64.55	-----	68.30	-----
Washington, D. C.	103.55	93.83	107.20	97.48

# THE FALCONS OF THE GREAT SMOKIES

SOME INTERESTING THINGS ABOUT THE ONLY PAIR OF  
"DUCK HAWKS" KNOWN TO BE NESTING IN THE SOUTHEAST

By JOSEPH S. DIXON



A close look at the Falcon's nest, showing the eggs and the newly hatched young bird.

THE Duck Hawk is the American representative of the peregrine falcon, a noble bird that was much used in the fine art of falconry by knights and ladies in the old days of chivalry. The peregrine falcon has an almost world wide distribution in the northern hemisphere, but variation in form, size and coloration is not great and the spirit of the bird is the same throughout its range. Even in captivity this remarkable bird retains, in a marked degree, its fearlessness and dignity.

Because of the tendency of this species of falcon to capture, by superior speed, the swiftest wildfowl in fair and open pursuit, the avian hunter at times has been regarded with disfavor by human hunters, and in some states it is considered a predatory species and is placed upon the list of birds which are not protected by law. However, the Duck Hawk is one of the noblest falcons and is worthy of retention in America's native fauna. It is only in such protected areas as the National Parks that adequate protection for such species of birds which are persecuted at every hand in many localities may be looked for.

It was a great pleasure to be permitted to accompany several members of the Smoky Mountains Hiking Club on a trip into one of the most rugged portions of the Great Smokies in April, 1932. Because of possible danger to the rare birds, which are, as far as is known, the only pair of Duck Hawks nesting in the southeast portion of the United States, great caution is exercised to keep their eyrie from becoming too well known. Located on a rocky pin-

nacle in a high, isolated portion of the mountains, the nest is fairly safe. However, there is a constant danger that the parent falcons, when foraging outside the Park, may be shot by hunters.

Properly speaking, there was no fabricated nest, as an eagle or osprey would build, but a mere cavity that had been scratched out in the bottom of a pot-hole in the face of a cliff. Here, on April 10, we found three recently hatched young and one "chipped" egg that was about to hatch.

I was much interested in the food remains. These consisted almost exclusively of wing feathers and other remains of bluejays, and the thought occurred to me that, since the bluejay is an outstanding enemy of many of our insectivores and songbirds through its well known habit of robbing their nests of eggs and young, the Duck Hawk is, in reality, a friend of the songbird. Dozens of wings and legs of bluejays were found strewn about the nest. From their observation in previous years, members of the hiking club informed me that this pair of Duck Hawks lived almost entirely upon bluejays, judging from food remains found at the nest. It should be stated that a few flicker feathers were also found, but the vast majority of bird remains were those of the common jay. Over a period of years the only remains of any waterfowl found at the nest of this pair of Duck Hawks were of one merganser, or "fish duck," a species believed to feed largely upon small trout and other game fish.

It is to be hoped that efforts to preserve the nesting Duck Hawks in the Great Smoky Mountains will prove successful.



Such cliffs as these, in The Chimneys above the clouds, afford suitable nesting sites for the Duck Hawks. This beautiful view is of the Smokies from Mt. Mingus. Through the floor of snow-white clouds in the center foreground rise the two peaks of the Chimney Tops like islands from a cloudy sea.

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# COMMENTS ON THE COPELAND REPORT

HENRY S. GRAVES AND WILSON COMPTON DISCUSS FINDINGS AND RECOMMENDATIONS  
OF THE FOREST SERVICE INQUIRY INTO THE FOREST SITUATION

The forest situation in the United States, as revealed by the recent inquiry of the Forest Service, unavoidably stands out as one of the great public problems of the day. The findings of the Government are so far-reaching in both a social and economic sense, and its program of public action designed to remedy conditions is so bold and comprehensive, that AMERICAN FORESTS has asked a number of men, authorities in different fields of forest affairs, to comment on the forest program recommended by Secretary Wallace. In this issue the comments of Henry S. Graves, Dean of the Yale Forest School, and Wilson Compton, President of American Forest Products Industries, are given.

The results of the inquiry in question were summarized in last month's issue of AMERICAN FORESTS, copies of which may be obtained at thirty-five cents each by writing The American Forestry Association. The complete report of the inquiry, popularly called the Copeland Report, has since been printed by the Government Printing Office under the title "A National Plan for American Forestry." The printed report is in two volumes and is available only through the Government Printing Office at the price of \$1.75 for the two volumes.

By HENRY S. GRAVES

Dean, Yale Forest School



Henry S. Graves

THE publication of the report, "A National Plan for American Forestry," prepared by the Forest Service in response to Senator Copeland's resolution introduced in the 72nd Congress, is an event of major importance in the advancement of American forestry. It is a compendium of existing knowledge regarding the forest problems of the country,

an analysis of the economic factors bearing on these problems, and an interpretation of their significance in the life of the nation. On the basis of this economic background there is presented a national plan of forestry to be developed progressively through the coordinated efforts of the Federal Government, the States, lesser public agencies, and private interests.

Even a casual review of the work reveals the comprehensive character of the inquiry by the Forest Service, the breadth of view regarding the problems involved, and the immense volume of information that has been brought together. The material is admirably arranged, with definite conclusions following the discussions of the various problems presented. For the first time we have, assembled in a single publication, the material for an adequate considera-

tion of a forest policy for the nation and for the steps which must be taken by the public and private agencies to make the forests contribute in a constructive way to the permanent economic and industrial welfare of the country.

In this brief statement it is possible to direct attention to only a few points which seem to me of special significance. One of the outstanding conclusions of the report relates to the failure of private ownership of forest lands. Private ownership has failed to prevent widespread depletion of timber and actual forest devastation. It has resulted in the exhaustion of regional supplies of raw material essential to sustain industrial activities. It has failed to maintain the forests in productive condition, and even today private owners, taken in the aggregate, are making little conscious effort to handle their forests with a view to continuous production of timber. Of special significance is the fact that privately owned lands are being abandoned on a very large scale through tax delinquency.

These facts underlie the conclusion that the public must take over the ownership and control of a much larger proportion of the forests of the country than has heretofore been proposed, and must also greatly expand its activities in direct and indirect aid to private owners. A huge program of public acquisition of forests is outlined in the report. The plan looks to the ultimate acquisition of three-fifths of the forest lands of the country. The public would absorb about one-half of the productive forest land, and a larger proportion of the submarginal land whose chief service is in watershed protection, prevention of erosion, and recreation.

I welcome this bold program, because it emphasizes the magnitude of the public interests involved in forests and forestry; it clarifies the economic, industrial, and social objectives of forest management; and it constitutes a challenge



to the *laissez faire* attitude of industrial ownership of forests and of the public generally. I am in sympathy with the larger objectives of the program of acquisition. Upon the first reading of the report I perceive that I may be in disagreement regarding certain features of the program, with particular reference to the extent of federal acquisition in some regions, the policy of purchasing large quantities of mature timber, and the feasibility of carrying out the program as rapidly as is suggested. Any program of such magnitude as that proposed must be judged in the large, with the realization that there will be economic changes that may materially modify it later on.

Even if the entire program of acquisition were carried out, there still is left to private ownership about half the task of timber production. The public is to participate in this problem by direct and indirect aid, which will help in removing economic obstacles to forestry, encourage good forest practices by education, demonstration and research, promote marketing of products, and reduce the burden of fixed charges by re-adjustments in the tax system, cooperation in protection, and perhaps in some cases public loans at a reasonable rate of interest. The proposals for public aid are in a large measure an extension of policies already

in effect. They involve, however, very large public expenditures. I am confident that any substantial increase in cost for public aid will call out a vigorous demand for assurance that definite results in private practice of forestry will be secured. It does not seem to me that the discussion of public aid in the report is convincing on this point.

The report does not go as far in the matter of public requirements on private owners in the management of their forests as, in my opinion, will be found necessary. In fact, I believe that measures of public regulation will be applied by individual states or groups of states much sooner than most foresters now expect, and that in many cases these measures will receive the endorsement of the forest industries themselves as desirable in their own as well as the public's interests. It is also probable that public aid which becomes so large as to assume the character of a subsidy will result in regulatory measures as a justification for the cost to the public.

The foregoing and perhaps other queries do not lessen my appreciation of this extraordinary report which reflects great credit on the Forest Service and those men who participated in it. The work merits high commendation from the whole country as a valuable contribution to national planning.

### By WILSON COMPTON

President, American Forest Products Industries

THE Copeland research deals deeply with the original source of the present forest problem—which is, for the timber owner, one of excessive and uneconomic production of forest products in ordinary times, due largely to pressure of huge holdings of timber subject to increasing annual taxes and other capital carrying charges forcing timber cutting and thus discouraging sustained yield planning and operation, which is one of the industry's greatest needs. The Copeland report is really an arraignment of the whole historic land ownership policy of the Federal Government, not only as to forest land, but also as to agricultural land. It is declared that the over-load of forest land and timber in private ownership has led to excessively large capital investment in manufacturing plants, high capital charges, pressure to liquidate, over-production, demoralized prices, waste of the raw product and large financial losses to the forest industries and chiefly to the lumber industry.

The conclusion is reached that public agencies should acquire 224 million acres of forest land, including a part of the abandoned agricultural land now available, and place it under forest management at the earliest possible date following acquisition. It is thought that a considerable part of this area will come to public ownership by reason of tax delinquency. It is suggested that the states and their local sub-divisions should acquire 90 million acres and the Federal Government 134 million.

Secretary Wallace gives his unqualified approval to this program of acquisition, with the attendant improvement of the forests involving replanting on a large scale. He says that he is convinced that the program will have as general approval in the future as the creation of the existing national and state forests now has. "So far as I can see," he says, "nothing can be gained and much will be lost by delay. The contribution to our national land problem will be very large and it is a contribution which is more and more urgently needed. There should be the opportunity for the large employment of labor in constructive public works."

The forest industries are in accord with the essential fea-

tures of the recommended program. Tree growing for commercial purposes and under the present conditions of taxation, protection and management in the United States is, in general, not a profitable or an inviting business—at least not attractive enough to interest American capital. Even in Europe tree growing, apart from direct and indirect public subsidy, has not been a successful venture.

The historic national land policy of turning the title over to individuals as rapidly as possible has played its part and had its day. It has played havoc in agriculture and in forestry. It was a policy seemingly suited to the times and conditions under which it originated. In fact, any other policy was politically impossible and probably would have placed the development of the nation and the growth of population in a strait-jacket. Now economic conditions are forcing the reversion of unproductive lands, both forest and agricultural, to public ownership.

The popular enjoyment of these resources served an important social, economic and political end in a great era of national growth. The timber and crops taken from them were indispensable. Now they have largely ceased to function economically. Their regeneration may be industrially necessary for the remote future, and certainly is and will be desirable for its social benefits. The Government in past times sought to serve the public interest through the conversion of most of the public domain into private ownership. Now it can serve the public (Continuing on page 284)



Wilson Compton



The valley floor at Simpson Meadow where the half mile of meadow water always provides the day's supply of fat, fighting trout.

AFTER seven hours in the saddle we dismounted at Simpson Meadow, in the great gorge of the Middle Fork of the Kings River, and surveyed our domain. From a grove of young yellow pines, beside a friendly, chuckling little brook, we could gaze down the flower-strewn meadow

## THE SPELL OF THE HIGH SIERRAS

By CLAUDE M. KREIDER

to the river which, flush with the snow water of early July, filled the air with a rumbling diapason of music.

Our arrival barely disturbed the forest folk at their affairs; a doe slipped away through the willows across the creek, probably conducting her new fawn away from these dangerous visitors; an anxious mother grouse conducted her brood quietly across the trail; a multitude of song birds stilled their voices only long enough to flit to the higher branches of the trees. We rebuilt the stone fireplace, unused since last year, raked together the clean, spicy pine needles for our tent floor, and then went fishing.

Thus, we were established in this finest of all the numberless high Sierra gardens for three weeks of indolent, care-free camp life. The trail journey to our "hidden" canyon required two days, but the journey is so filled with interest, with such a variety of far-reaching views across giant peaks, blue gorges, and wide lake basins, that we arrived at the meadow almost with regret; and this with full recognition of painful saddle blisters.

There are two general routes for entering the Sierras. From the San Joaquin Valley, to the west, one takes a trail up a great, forested canyon, and gains elevation gradually, day by day, as he approaches the alpine basins along the



A pack train in the Yosemite National Park, on the rim of Tuolumne Canyon.



Photographs by Frashers.

Signing the register in Muir Pass—these registers, in non-corrosive, water-proof metal cases, have been placed in most of the major passes by the Sierra and the California Alpine Clubs.



In entering the High Sierras, one may journey in one day from sage brush and desert heat to the wonder of eternal snow. These weird shaped lodgepole pines attest the severity of the storms of winter.



western crest of the range. We chose the eastern approach, from Owens Valley, after a day's drive across the desert, and enjoyed that ever striking and most bizarre paradox which this great wilderness has to offer—the journey from sage brush and desert heat to eternal snow, all in one day.

Four hours from the road end we were crossing Bishop Pass, at just under 12,000 feet, and our pack mules were struggling through two feet of frozen snow. We were the first party to cross that summer, and were, therefore, accorded unusual honors, for the outfitter had sent up a man the day before to shovel a passage through a long snow drift that was seven feet deep.

From the pass, above which towers the 14,000 foot Palisade group of spire-like peaks, we descended swiftly, through a series of green little alpine meadows, to the deep and blue Dusey Lakes, where we paused for a saddle bag lunch.

From the lakes we descended 3,000 feet of "hair pin" trail in less than three miles, and then thankfully made camp on the narrow floor of the upper Kings River Canyon. The second day's journey down that tremendous, glaciated gorge enthralled us. To the east was the Palisades Tower, 6,000 feet above us; directly above, to the west, Mt. Woodworth, Devil's Crag and others appeared actually to overhang that narrow canyon floor, which is wide enough only for the trail and the tearing white river. The power of those rushing waters entranced, as we rode, mile after mile, beside white-plumed cascades, thundering falls, and roaring, mist-shot cauldrons. Sometimes we turned from this display of elemental, destructive power to the brave little tributary streams which spring out, in wavy, lace-like streamers from the canyon rim, a thousand, two thousand feet above us.

It is difficult to convey the pleasure of life in this secluded, green valley, and how free and indolent one may live. It is fun to lie in the shade and loaf and talk while gazing up past the tree tops to the castellated walls and round granite domes 3,000, even 4,000 feet above. Then, when ambition stirs, to sharpen the ax to razor edge and cut arm loads of willow wands to cover the rustic dining table, or to split clean pitch slivers from the nearest stump.

Always, in the evening, we go fishing, for the sport in the river is unsurpassed—beyond the dreams of the low country fisherman who plies his art in much fished, populated waters. We rarely take more than a dozen trout a day, although we sometimes release unhurt a few shining warriors after they have lost the battle.

Now, for the benefit of summer visitors to this region, and their numbers are increasing each year, I will tell a secret. These trout are the famous, but little known, Sierra golden trout, and their numbers are great. They are gamey fighters, eager takers of the artificial fly, and as beautiful as an autumn sunset. And their name is no misnomer, for these fish are actually as bright golden in color as a gold coin fresh from the mint. Not many years ago the native rainbow trout were here, but the goldens of the upper river worked down over miles and miles of falls and rapids, to hybridize with, and change to their own glorious colors, their rainbow cousins.

All of this mile of meadow river is "fly" water, where great finesse in casting is unnecessary. Too, one may be quite choosy as to the size of fish he may take. We used sizes ten and twelve in a few standard flies such as the hackles and the Royal Coachman, and bothered little to make long casts, or to fish difficult reaches of water. And we sometimes found it pleasant, if less artistic, to sit comfortably on a warm rock, and let an angle worm trail down the current to the waiting trout under another boulder. In the last hour before darkness, the trout rise constantly, and will take the "simon-pure" orthodox dry or floating fly in a manner to warm the heart of the rabid dryfly fisherman.

There is a delightful charm in exploring thoroughly the

woody thickets, the virgin forests, and the many deep mysterious side canyons here in our valley. It is an absorbing game, and one which, after two trips, we have not completed. There are still great, black tributary gorges, hidden glades, and musical little brooklets which we must investigate.

We are saving for another time the tremendously deep and rugged Goddard Canyon, which extends from a forested plateau across the river far, far back to the north, where it "pinches out" under the menacing black scarp of mighty Mt. Goddard. We have fished back to the first bench, but beyond that we know nothing.

To the south from camp a trail rises steeply to an elevation of 11,000 feet, in Granite Pass, where one may look abroad over several thousand square miles. We can reach the pass in six hours of steady climbing, and then gaze almost straight down, to the south, into the hazy, blue void of the Kings South Fork Canyon. Along its south wall rise great domes and spires equal in majesty, and in sheer elevation, to the finest domes of Yosemite. And above these granite monsters rise other peaks and pinnacles, tier upon tier, back to the 14,000 foot summits of the Main Crest. And strangely, that skyline, which stretches forty miles to the south, is dominated by the massive twin peak of Mt. Williamson, 14,384 feet, although we know that Mt. Whitney's helmet shaped crest rises only a few miles distant from it.

On most of our Sierra trips we do our own packing, and move camp when the desire strikes us. Thus, when we reach a major pass, we take shelter under a rock or cliff, unroll the maps and revel in the wanderlust, as we trace out trails on the sheets, then look abroad to see what kind of country we shall find. Each pass crossing the Main Crest is a gateway, a major artery, even though the trail be a few scratches on the bed granite. It is a way through, to other intersecting trails, which lead into the misty regions to north and south.

The magic key to all of this tremendous alpine area, which may be said to be, roughly, sixty miles wide, and 250 miles in length, is the John Muir Trail, which connects Sequoia National Park, at the south, with Yosemite to the north. Within a day's steady climbing from most points at the eastern base of the range, one reaches this magic highway. And it is veritably a highway, even though only a scant foot in width, for it is the only way through.

After a few trips over the marked trails we fell victim to that strange Sierra fever, which dictates the leaving behind of all trails and signs and monuments, and making our own way across country. This entails an enormous amount of labor for the animals, taxes severely our own ability as amateur engineers in getting the outfit through without accident, and sometimes leaves us stranded on a wind-scoured, rocky ridge for a night's camp. But it is fun.

One summer we explored out a great lake basin, and found twenty-seven unnamed lakes, most of them stocked with golden trout. Another year we "prospected" a route over a giant ridge into Sixty Lake Basin, and made it passable for horses. Then a last ten-foot barrier of rim-rock defeated us; but it was a great adventure. Next year we plan on riding to the top of Mt. Whitney, which is easily done, over the newly constructed trails; and then investigate Lake Tulainyo, 12,865 feet in elevation, together with other little known lakes in that vicinity.

On our first trail trip of three weeks, many years ago, we saw just three parties of "tourists." In late years we have seen their numbers increase immensely. The new hand at the game will usually go in with a packer who knows the trails and the handling of the animals. This is wise. But he will soon learn to manage his own outfit, and, if he glories in being free and independent, he will thereafter, and with huge satisfaction, handle his own pack train.



## EDITORIAL

### Conservation Versus Politics

THE recent dismissal of William T. Cox from the position of Commissioner of Conservation of Minnesota by a three to one vote of the Conservation Commission serves to emphasize again in an unmistakable manner the never ending struggle between public welfare and selfish, political interests. In any system of government in which political parties are a factor the well nigh irresistible tendency of party leaders is to place the advantage of the organization first and public welfare second. In an earlier age with simpler problems of government it made but little difference which party was in power or how they behaved. But that day is long past. With the advent of modern industrial and economic problems the welfare of civilization becomes increasingly dependent on governmental supervision and control.

This applies with especial force to the conservation of natural resources which, if not protected against unrestrained private exploitation, will be speedily destroyed. This supervision can be exercised intelligently only by men trained in the technique of conservation who can feel secure enough in public service to make it a career. Political allegiance is innately hostile to any such basis of public service. The extent to which the natural resources of our country can be protected and restored will be measured not merely by public, financial and moral support, but to a far greater extent by the success which attends popular insistence upon the employment and retention of capable trained executives who are able to handle these resources intelligently and efficiently.

It is a matter of record that Mr. Cox's reputation for technical efficiency was not challenged by the members of the Board who voted to dismiss him. The charges of insubordination which they brought against him were branded by a committee of the State Senate which investigated the Conservation Department as "puerile and such as would stand before no jury." The Board, it was found, had ignored the clear wording of the conservation law by assuming duties and authority over subordinates and heads of departments which should have been exercised by the Commissioner. Thus, the fundamental precepts of efficient administration had been repeatedly violated by Board members, thus depriving the Commissioner of authority and responsibility. Finally, the public hearing which was to have been held on April 21st was postponed without notice after permitting interested citizens to wait several times. On the following day Mr. Cox was dismissed over the protest of one member. The fifth member, not in sympathy with the proceedings, had previously resigned.

It is time that the average citizen realizes the need for distinguishing the role of politics from that of technical efficiency in caring for natural resources, and makes his voice heard so vigorously in protest against such disgraceful proceedings as characterized the Cox dismissal that politicians irrespective of party will learn that there are some functions of government which must be rendered immune from their influence.

### The Public Domain and Unemployment Relief

TO assure the greatest possible success of the Emergency Conservation Work Project, Congress should act at once to bring the Public Domain of the United States under administrative control. Such action will help meet a critical problem with which those responsible for maintaining the relief program of forest work are certain to be faced next winter. Before the summer is far advanced some 275,000 young men will be in forestry camps scattered throughout the nation. In the western half of the country by far the greater number of men will be engaged upon forest work in the mountain country embraced in the National Forests, Parks and Indian Reservations. While there is plenty of work to be done in these high elevations during the summer time, the coming of winter with its heavy snows and low

temperatures will inevitably curtail many activities and force either the release of numbers of men or their removal to southern reservations where work can be done during the winter season.

Much of the Public Domain, which embraces some 180,000,000 acres, lies at lower elevations and surrounds the mountains in which the men will work this summer. Here winters are less severe and constructive work is entirely feasible throughout the year. Vast areas lie adjacent to the mountain ranges so that work camps in the high elevation could be readily moved down to the Public Domain with the coming of winter. Removal of men long distances would be avoided and the continuity of the whole work program would in many regions be simplified and stabilized. In ad-

dition, the urgent and long standing need of stopping the deterioration of the Public Domain would be very definitely served.

But under present conditions a comprehensive program of work on the Public Domain is not justified for the reason that administrative control and protection of these lands is lacking. Congress has never granted adequate authority to the Department of the Interior to regulate their use, or to administer them under a system of conservation management, such as applies to the National Forests, Parks and Indian Reservations. Without such authority it would obviously be a waste of time and money to employ the conservation workers upon a public lands reconstruction program for the reason that the Government is without power to protect and maintain the work accomplished.

Congress can and should speedily remedy this situation by passing an act providing for the administration and regulated use of the Public Domain. The action has long been justified from the standpoint of public policy. At this time it is doubly urgent if disruption of the conservation relief program is to be avoided and adequate winter jobs are to be available in many localities. Proper management of the Public Domain calls for a great diversity of land improve-

ment work including the revegetation of badly depleted ranges, the building of check dams and reservoirs to control floods and erosion, the development of springs and the construction of drift fences to control grazing, the building of administrative sites, roads, telephone lines, fences, etc., needed for the general administration of the lands. Much of this work can be done advantageously during the winter. Men competent to judge have estimated that if adequate authority to apply conservation management to the Public Domain is given governmental agencies, there is ample work to utilize over 100,000 man-months of labor. As the situation now stands, however, most of this potential employment is frozen up by congressional inaction.

For more than a quarter of a century Congress has been urged to deal constructively with the Public Domain. Immediate action, we believe, has become an emergency need from the standpoint of assuring maintenance and continuity of the forest relief program for the two year period contemplated. Unless Congress acts while now in special session, it will be too late because the summer is required for governmental agencies to map out necessary programs of public lands work and to prepare for the handling of the men next winter.

## Self-Sufficiency in Conservation

AMERICA'S gradual awakening to the fact that insurance against future depressions and unemployment must include the reclamation and reconstruction of our land resources becomes more and more apparent. President Roosevelt's Tennessee Valley project is but one of many instances of this type of progressive thinking. There are those doubtless who look upon ideas of land reconstruction as something unique to this country and as evidence of America's social and economic leadership. They should not be so fooled. Many European nations, since the World War, have advanced on the road of land reconstruction and are engaged upon projects of one form or another, with which the United States would do well to keep in close touch.

One of the most interesting is under way in Italy. It is interesting because the undertaking is national in scope and embraces the improvement or reclamation of the land in all respects, including the control of mountain streams and the checking of soil erosion through afforestation on mountain slopes, control of run-off through the construction of reservoirs, irrigation, and the reclaiming of idle lands in the plains below. This vast national work, known as "*Bonifica integrale*," or the organization of integral land improvement projects, was inaugurated a few years ago as one of the leading policies of the Fascist regime and is now in full swing. In this project forestry is intimately integrated with agriculture and engineering in one great and comprehensive plan of land improvement. In Italy, it is "*Bonifica integrale*" from the mountains to the sea.

Commenting upon the project a few weeks ago, Arthur Ringland, foreign forestry representative of the Department of Agriculture, stated the purpose of the undertaking is to provide employment for the growing population of Italy, to distribute the surplus urban population and to make the nation as nearly self supporting as possible.

"The work envisages the complete elimination of waste areas," Mr. Ringland writes. "All land must serve some useful purpose directly or indirectly, hence nearly all projects have their beginning in corrective work in the mountains and in the regulation of the run-off of mountain basins. That is why forestry plays such an important part. The

entire project of '*Bonifica integrale*' is brought together under a special division and Under-Secretary in the Ministry of Agriculture and Forests. This division includes, in addition to the general administration, the Corps of Civil Engineers, the National Forestry Police and the Regional Agricultural Inspectorates.

"Improvement projects are carried out either directly by the State or more generally by so-called consortiums of local landowners. These consortiums can be imposed where the owners of one-quarter or more of the area involved demand the cooperation and help of the state. Expropriation too can be enforced if in the public interest. From what I have ascertained the problems involved touch very closely upon those at home—waste lands, soil erosion, correction of run-off and control of floods, surplus labor (unemployment), maldistribution of populations in congested centers, and their settlement in rural areas. Finally the measures of attack: the integration in execution of every phase of the problem, for no project is independent and localized; improvements on the plains and in the valleys are intimately related to improvements in the mountain areas. '*Bonifica integrale*' is no grandiose paper scheme; it is at work and over one million acres are said today to be recovered or in process of recovery at an expenditure of \$150,000,000."

It would be unfortunate if the American movement for land reconstruction proceeds on the basis that only Americans know it all and that this country has nothing to learn from the experience of nations that are already engaged with the problem. It would be stupid indeed to ignore the experience of these other countries. To be broadly successful and to avoid costly mistakes, land reconstruction should be planned first as a national project into which regional projects will fit as well cut blocks in the final building. Even though conditions and forms of government in other countries may be different from our own, intensive study of these foreign land projects and current contact with them should have an important place in the formulation of America's plans for land reconstruction. The insignificant expense of maintaining this contact may well effect savings eventually running into billions of dollars.



# MAKING LOG CABINS ENDURE

By  
GEORGE M. HUNT

IN THESE days log cabins are built mostly for summer forest homes or for recreational purposes, although in sparsely settled wooded sections of the country log cabins for year-long homes are still in vogue. Whatever the purpose few people want to build a cabin that will set into decay in a short time, a process that is usually the case when insufficient knowledge of structure is the rule. The avoidance of decay is not difficult, and long life may be assured for the forest cabin if simple precautions are taken in its building.

Of first importance is the foundation. The easy thing to do, and too frequently the thing that is done, is to lay the bottom logs directly on the ground. A little reflection should disclose the hazard this entails for there are few people unaware of the fact that placing wood in direct contact with the ground is one of the surest ways to hasten its decay. The soil moisture has direct access to the wood and keeps it damp, making conditions very favorable for the growth of the fungi that cause decay. The rate at which the decay will progress will depend upon the natural decay resistance of the wood used and the dampness of the site. Logs of some species, such as cedar, are decay-resistant and their heartwood will last a long time even under unfavorable conditions. Since the decay resistance is only in the heartwood longest life can be expected from logs containing the least sapwood. Aspen, on the other hand, is one of many species that have little resistance to decay either in the heartwood or sapwood. In dry climates and dry situations decay will be slower than where there is more moisture. In any case contact with the ground should be avoided.

Good practice requires that the bottom logs or sills be kept a foot or two above the ground on foundations that will keep the wood dry. Stone or concrete is excellent. Brick piers or posts of decay-resistant wood may also be used to advantage except in termite-infested ground. Good ventilation beneath the floor is important because it keeps the soil and the wood dry. Foundation posts or piers allow good ventilation unless the spaces between them are filled solid. Screen or lattice work between the piers will improve the appearance, keep animals out and trash from accumulating and still allow good ventilation. If solid foundation walls are preferred to piers generous openings should be provided at intervals to allow good air circulation. If the building is to be used throughout the year where cold temperatures prevail in winter, good ventilation makes cold floors in cold



A well-built cabin at the end of the trail is a haven of rest and quiet.

weather. This may be prevented by boarding up the openings in cold weather but leaving them open during the rest of the year.

An important aid to keeping the foundation dry is good drainage. If possible the site should be graded or ditched so that water drains away from the building and not towards it. Storm water should not be allowed to accumulate around the foundation or under the building. Wide eaves are another safeguard. By their protection both the walls of the building and the foundation are kept dry in all but driving storms. Troughs add to the effectiveness of wide eaves.

In putting up the walls and framing the window and door openings care should be taken to avoid forming crevices where water can accumulate and soak into the wood. Storm water does little harm to the building if it can run away quickly, but if caught in joints, crevices, or checks where it cannot drain out it will soak into the wood and dry out very slowly. The wood may in this way become so wet in spots that decay sets in. Examples of this kind of decay can be found in almost any log building after a few years of service.

In some parts of the country termites or "white ants" are very troublesome. The ground-inhabiting termites are the most plentiful and most important type. They enter the wood from the ground and honeycomb the interior, eventually destroying it. Since they leave an outside shell of wood intact when working above ground they may do a great deal of damage without being discovered. Wood in contact with the ground falls easy prey to these insects but by taking proper precautions their attacks can be prevented. Masonry or similar foundations eighteen (Continuing on page 287)

# A FOREST PAGE FOR BOYS AND GIRLS

Conducted by WAKELIN MCNEEL

## THE BOY AND THE FARM WOODS

THE farm woods comprise one-third the forested land of our country. That is a surprisingly large and important figure. The owners of these woodlots are the world's greatest users of wood. While it follows logically that these owners should realize the value of the woodlot and should keep the woodlands

in a high state of production, the fact remains that they are farmers first and foresters second, if foresters at all. Farming and forestry go hand in hand, and E. V. Jotter, of the School of Forestry and Conservation, University of Michigan, believes that boys with a love for the outdoors can be enlisted in the cause of upbuilding the farm woodlands. He writes:

"There are several answers to the question 'What can a boy do in the farm woods?' In pioneer times and no doubt right now, when fuel from the farm woods means money saved, dad's answer was 'Saw up the wood, and split it.' Later, of course, the wood would have to be piled, and after that would come the regular request from the chief cook: 'Will you please fill up the wood box?'

"A boy's answer to our question would concern itself probably with the pleasant pursuits offered by such a woods. I recall very clearly my woods trips on my grandmother's farm in Ohio. Snow, the dog, was a constant companion. Of course there were no Indians or bears, but a vivid imagination could easily conjure up visions. Small animals and birds were plentiful. Red and gray squirrels and rabbits were common; opossums and 'coons were present, and once in a while I saw the tracks of a fox. Hawks and owls were in evidence, and any bird-lover could have filled a notebook with the various species to be seen.

"And the delight of woods fruits! Wild strawberries, May



An ideal forest, well stocked with all age classes; and a splendid game cover.

apples, berries of all kinds, and in the fall hickory nuts, walnuts, and butternuts. Many a noon meal was delayed and grandmother's devotion strained by a too long absence in that fascinating woods.

"Lucky the man who has such memories, and lucky the boy who may enjoy such experiences! Animal and plant

life may differ and the exact kind of interest vary, but a woods trip means adventure for a boy whether he lives among the New England hills, the southern pines, the Central States hardwoods, the planted forests of the Plains States, or on a western forest homestead.

"But unfortunately the continued cutting of trees for lumber, ties, fuel and other products, and the ravages of fire and grazing have reduced many forests to open stands as unfavorable for tree growth as they are for animal and bird life. Or, more tragic, places where stately trees once grew in abundance are now a sandy waste, a gullied clay field, or a barren area of unprofitable land.

"It is in this sort of an impoverished woods, or even barren land, that the boy of today finds his opportunity to help make the farm more attractive, interesting and profitable. Dad naturally will have to be consulted about this, and perhaps persuaded. Dad may have a keen recollection of the fun he used to have and fall in with your hopes and plans to build up the recreation side of farm life. Or, if he is not particularly enthusiastic about the recreation idea, perhaps it is because he, like most parents, has experienced the pinch of hard times and has to think first in terms of cash returns, for parents must always consider costs and returns in order to realize their dreams of providing for their children and maintaining their own independence. If you need arguments, consult the County Farm Agent or write to the United

States Forest Service at Washington, D. C., for a publication on the profits of growing timber crops. If you are really interested in improving the woods and can convince your father of this fact, you will probably win his enthusiastic support.

"You will need some instruction at this time on how the work should be done. The purpose of this article is merely to point out what is possible. The county Farm Agent will be glad to help you. Perhaps you and other boys can organize a 4-H Ranger Station; or your high school agricultural teacher will help you. Practically each state has an Extension Forester who is usually located at the State Capitol or State Agricultural College with whom you can correspond. The state forester might be of assistance, and forestry schools, state conservation departments, local, county, state and federal foresters may also be available.

"Now for a little discussion of the general way to make the most of such an opportunity. Of course readers in various parts of the United States will vary their methods to obtain results best suited to their region. We can start with a boy on a farm in the Central States. The woods on the farm has been cut over, the best trees removed, and the woods heavily pastured. What is the first thing to do? If the woods is on the least valuable part of the farm it would be well to plan to keep that part permanently wooded. If, however, the woods is on good land and the trees are very poor and scattered, it may be best to clear the land and plant a new woods on the least

profitable part of the farm. We will assume that the woods is to be kept on its present location. Since cattle do serious damage to a woods by browsing on young trees, trampling the feeding roots near the surface, and reducing the moisture content of the soil by packing the earth, you must first of all keep out the cattle. If extra pasture is needed, fence off one quarter of the area, cut all but a few shade trees, and seed

the land to some good grass. Experiment stations have proved that this one quarter provides as much feed as the entire woods did. In fact, in a real woods there is no feed at all, since the trees keep out the light.

"Now for your forestry operations. Shall you begin by immediately going out and doing some cutting, or perhaps a little later some planting, without thinking particularly of how or why? No, you must have a plan, and before you make a plan there are some things to be known. What kind of a woods have you? Are there young trees and, if so, are they of the best species?

How many board feet of sawtimber, or cords of fuel or pulpwood are there? Are there Christmas trees? Other products? Game? You must take stock like a storekeeper, or, in forestry terms, cruise the stand.

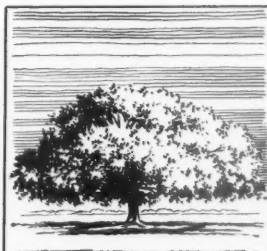
"First you want a good map. Data for this can be obtained by pacing and using a compass. Show on the map all streams, roads and buildings—in fact, everything that is usually shown on maps. Indicate the timbered and open spots, and perhaps the location of the various timber types might be shown in color. The (Continuing on page 288)



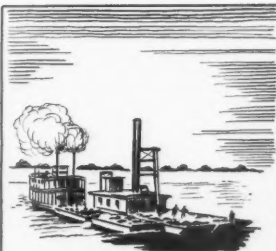
In the farm woods a boy has a treasure trove of wild life to explore and enjoy. Here is seen a grouse, on his drumming log.

## FAMOUS TREES EVERY BOY AND GIRL SHOULD KNOW

### No. 8 ---THE "GREEN TREE HOTEL"



NOBLEST AMONG THE TREE CELEBRITIES OF THE UPPER MISSISSIPPI VALLEY IS THE FAMOUS ELM CLAIMED BY THE OLD RIVER TOWN OF LE CLAIRE, IOWA. IT IS KNOWN AS THE 'LE CLAIRE ELM' AND THE GREEN TREE, BUT TO RIVER MEN IT WILL ALWAYS BE THE 'GREEN TREE HOTEL'.



IN THE ANTE-BELLUM RIVER DAYS, IMMORTALIZED BY MARK TWAIN IN 'LIFE ON THE MISSISSIPPI', THE VILLAGE OF LE CLAIRE WAS AN IMPORTANT RIVER PORT. A FEW YARDS UPRIVER FROM THE LANDING PLACE STOOD THE ELM, A RENDEZVOUS FOR RIVER MEN FROM FAR AND NEAR.



UNDER ITS GRATEFUL SHADE THEY CONGREGATED, SPREAD THEIR BLANKETS, AND COOKED THEIR MEALS, OFTEN MAKING THIS SPOT THEIR HOME FOR WEEKS AT A TIME. WITH CHARACTERISTIC HUMOR THEY DUBBED THIS OPEN AIR LODGING HOUSE 'THE GREEN TREE HOTEL', AND BY THIS NAME IT CAME TO BE KNOWN BY ALL RIVER MEN.



THE TREE, THOUGH, HAS BEEN DEDICATED TO THE MEMORY OF COLONEL WILLIAM F. CODY, (BUFFALO BILL) WHO PLAYED AS A BOY BENEATH ITS SHADE. A MONUMENT TO CODY NOW STANDS AT THE BASE OF THE TREE.





Forest grown trees may lift their crowns more than 200 feet above the ground, and attain an age of 500 years.

# PONDEROSA PINE

PINUS PONDEROSA, DOUGLAS.

**K**NOWN until recently as Western Yellow Pine, and by a variety of other names, this tree of the western mountains is now recognized as Ponderosa Pine. It grows in fairly open stands from British Columbia and the Black Hills of the Dakotas southward in the Pacific and Rocky Mountain regions to western Texas, New Mexico, Arizona and on into northern Mexico and Lower California. Northern and Pacific coast forms have been differentiated from the southwestern ones but this description includes all forms under the single heading. In different parts of its range there is noticeable variation in length and thickness of the needles, size of the cones, color of the bark and texture of the wood.

It grows on well drained uplands and mountain slopes up to elevations of 12,000 feet in the southern part of its range and in dry valleys at lower elevations in the north. In the Colorado plateau of northern Arizona and New Mexico it constitutes over four-fifths of the stand in vast valuable forests at elevations of 6,500 feet to 10,500 feet above sea level.

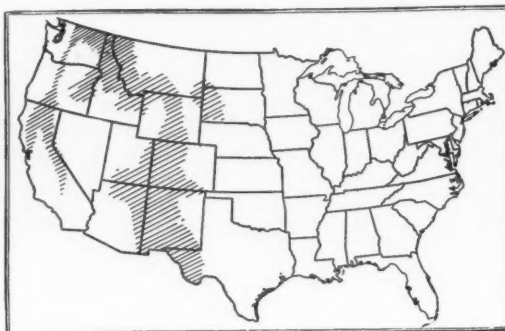
Members of the Lewis and Clark expedition first reported it in 1804, while going up the Missouri River. Twenty-two years later, David Douglas found trees growing near the Spokane River in eastern Washington. He suggested the name *Ponderosa*, because of the ponderous bulk, and sent seeds to European gardeners.

Ponderosa Pine trees attain heights of 150 to 230 feet and five to eight feet in diameter at breast height. They may be 350 to 500 years old and the regular spire-like head surmounts a massive trunk whose irregularly divided scaly bark is cinnamon brown to orange yellow. Until the trees are 80 to 100 years old the bark is less broken and dark brown to nearly black. This accounts for the name Black Jack Pine and the occasional idea that the dark barked trees are unrelated to the older trees with the brighter colored bark.

Grouped botanically among the pitch pines, Ponderosa Pine has needles five to ten inches long which are borne in clusters of two and three. Normally these remain on the twigs from three to seven years.

The brown cones are three to six inches long and are frequently in a cluster. Before the seeds ripen the cones are bright green or purple and stand erect on their short stalks. As they ripen they become a reddish brown, turn down and the scales spread open for the winged seeds to escape. Ordinarily there are two full rounded somewhat triangular seeds about a quarter of an inch long under each scale. The wings are broadest below the middle and an inch to an inch and a quarter long, are so balanced with the seed as to carry it on a wind from 200 to 1,000 feet from the parent tree. Frequently when the mature cones break off, a few of the scales are left hanging to the stem.

Although the seeds have a strong resinous flavor, making them inedible, the Western Indians strip the bark in spring and scrape it for the



Natural range of Ponderosa Pine within the United States.

sweet nutritious layer of living cambium. A spicy odor as of orange peel is given off by the twigs when crushed which sometimes seems to pervade the entire forest.

The hard, strong, comparatively fine grained wood is light red with a narrow band of nearly white sap wood and weighs 25 to 28 pounds to the cubic foot when air dry. The light weight has led to its confusion with white pine, with which it compares favorably for strength. A fungus known as "blue stain" frequently disfigures the sap wood of trees cut in warm, damp weather, but does not materially reduce its strength. The wood is widely used for general construction, interior finish, boxing and crating. It is not strong enough for heavy construction and is too easily attacked by fungi to be used in contact with the soil.

The estimated merchantable stand of 251,560,000,000 board feet of timber is second only to the stand of Douglas Fir in this country, while the amount of lumber cut ranks third. In 1927 the cut of Ponderosa Pine in the United States was 2,798,754,000 board feet with the largest amounts coming from Oregon, California, Washington, Idaho, Arizona, Montana and New Mexico.

Ponderosa Pine grows vigorously from seed and adapts itself to forest plantings. It has been successfully planted over its natural range, and to a considerable extent in the eastern states, but is not generally a rapid grower. There are so many other trees better adapted to eastern conditions that it is not recommended for planting outside of the area where it is native.

Subject to a number of insect and fungus enemies, the resistance of the tree is evidenced by its wide distribution, the large areas of forest in which Ponderosa Pine predominates, and the great age and size which it frequently attains. Next to fire, the two most serious enemies of Ponderosa Pine are the *Dendroctonus* bark beetles and mistletoe. Attacks by bark beetles may follow fire damage and frequently accompany mistletoe. This is a less showy form of mistletoe than that associated with Christmas decorations, but is a parasite to be reckoned with in any form of forest management. The mistletoe centers its attack largely upon the limbs and branches, while the bark beetles channel beneath the bark of the trunk and kill the tree more quickly.

Two forms of needle disease are common which either distort the needles or cause them to die. In neither case do these diseases kill the trees, but they materially reduce the rate of growth.

In Oregon and other parts of the West caterpillars of the Pandora Moth have eaten the needles from large areas of merchantable pine. They reach proportions of an epidemic at fairly regular intervals of twenty or thirty years, and continue abundant for six to eight years.

The size of the trees, the great area over which they grow and the relative inaccessibility of many of the timber stands makes absolute control impracticable. Although mature trees are fire-resistant, foresters in charge of forests of Ponderosa Pine face a real problem in keeping its enemies, including fire, within bounds.



Photograph by Woodbridge Metcalf

The green cones maintain an upright position into their second year, when they become brown, turn down and release the seeds from between the back-spread scales. Usually three, but occasionally two needles are held in a cluster.



Photograph by Woodbridge Metcalf



Close pressed papery layers or scales make up the bark, which is cinnamon-brown to orange yellow in the older trees, but nearly black in trees younger than 80 or 100 years.

## "Roosevelt" - - Forest Camp No. 1

(Continued from page 254)

"So you call yourself a carpenter," he taunts, not unkindly. "Get over to the dispensary, quick!" To another: "Did you take a bath today? No? Then scrub yourself before supper and report to me. Every man in this camp must keep clean, no matter how cold the water is. And I'm here to see that he does."

Later, in one of the tents: "How did you break this cot?"

A nineteen year old Hercules shuffled awkwardly. "I've got a lot of beef here, sir. I just sat down and—"

"This is the second one you've broken down," the old trooper cut in. "What about the first?"

"That was a week ago, sir, and I was just as heavy. You see, I was trying to scratch my back when—"

"Listen, son, I've slept on a cot like this for twenty-seven years and never busted one up. And do I look like a wilting lily? Don't break any more, savvy?"

And so it goes, from morning to night—an old trooper building men. And what does Sergeant Nesbitt think of his new army? "They're a good bunch of kids," he chuckled, "but they've got lots to learn—and forget. They need training and discipline, but most of all hours of hard work and hard play. They have about forgotten how to do both."

There are few recreation facilities in Camp Roosevelt as yet. An area has been set aside for athletics, particularly base ball and volley ball, but there is a real shortage of equipment. The men give their evenings to story telling, to writing letters, to reading—some to song. There is a banjo and guitar in camp, and there are a number of good voices. A group of interested Shenandoah Valley citizens gave a dance for them, and others at times have entertained individuals. Over the week ends many of the men make short trips to interesting nearby points. Others attend church.

Physically, every man in camp has shown remarkable improvement. No one has gained less than three pounds, and a number have put on from twelve to fifteen. All are tanned by the sun. Their appetites are unbelievable. According to Lieutenant Carhart, the supply officer, it requires a pound of meat per man per meal to keep them satisfied, almost twice the amount needed to feed Army regulars. It is not uncommon for the civilians to appear in the mess line two or three times at a meal. One blond youngster holds the record. First in his platoon line, he came back three times to consume four full portions.

According to Lieutenant Kossow, medical officer, the general health of the camp is excellent. A number of the men suffered severe colds following the experience of that first night, but only a small number have been confined to the dispensary. There have been many minor accidents, but this is attributed to carelessness and the fact that they are unaccustomed to outdoor life and the work they are doing.

While all of the civilians at Camp Roosevelt were enrolled from Washington and nearby Virginia, more than fifty per cent are from other sections of the country. Twenty-six states are represented in all, with three foreign countries—France, Italy and Russia. Seven of the recruits are college men, while eighty-one have high school educations. A hundred attended graded schools.

Twenty of the men in camp are down on the "occupation list" as truck drivers, fourteen as painters, seven as typists, five as carpenters, five as electricians and five as mechanics. There are three draftsmen, three sheet metal workers, two machinists and two cooks. Two engineers are listed, as are two plumbers. There is a dentist, a motion picture operator, a concrete mixer, a nurse, a butcher, a bookkeeper and a blacksmith. A newspaper man serves as headquarters clerk. The list further reveals a musician, a cabinet maker, a telephone operator, a shoemaker, a tinsmith, a radio repairman, a lumberman and a tree planter.

The first forest work the Corps will be assigned to will be road building and timber stand improvement. According to the Forest Service, there are nearly fifty thousand acres of young timber in need of improvement in the George Washington National Forest alone. This work consists of thinning overcrowded stands, clearing out dead standing trees and windfalls, and reforestation where new species are desired. The men will also construct fire lines.

So to this unique tent city of opportunity high in the fastness of the blue Virginia mountains has come the legion of wandering youths. It has come for a period of rebuilding, the tearing down of the shell of idleness for the castle of work. In place of unkind highways, and streets they will find an understanding nature. They will make comrades of trees, friends of the wild things, and companions of the stars. And they will come away still youths in years, but men in heart.

For this is the way of the forest with men.

### Secretary Wallace To Attend White Mountain Meeting

Secretary of Agriculture Henry A. Wallace has accepted the invitation to attend and address the 58th annual meeting of The American Forestry Association, which will be held in the White Mountains of New Hampshire, September 5-8. His subject will be—"The Restoration of Rural Life."

Plan now to attend this meeting. It will be the conservation rally of the year. Eight other conservation organizations are participating. There will be three days of motor trips through the White Mountain National Forest and surrounding country and three evenings of interesting talks and discussions at the headquarters hotel at Franconia.

President Roosevelt may be present. He has been invited and will let us know later if affairs of state will permit him to attend. If so, a Presidential Luncheon will be given in his honor.

The opening session of the meeting will be the evening of September 5 at the Forest Hills Hotel, Franconia, which has been selected as the headquarters of the meeting. The hotel is making special rates of \$5 a day for room with bath and meals. The meeting is open to the public and every one is urged to come and see some of the most outstanding accomplishments of conservation America has to offer. Enter the dates on your calendar and make room reservations now by writing either the Forest Hills Hotel, Franconia, New Hampshire, or The American Forestry Association, 1727 K Street, N. W., Washington, D. C.



# THROUGH THE LENS



"SHORE PINES"

—John D. Richardson

## Interest In National Photographic Contest

WITH the announcement of The American Forestry Association's prize competition for the most beautiful photographs of trees in America, which opened May 1, a number of questions have been raised which will undoubtedly interest those planning to compete.

The most pertinent of these has to do with the features and qualities which will determine a prize winning photograph. "Must the tree be dominant in the composition of the picture?" one photographer asks. "Or will a photograph in which trees serve only to perfect composition receive the same consideration from the judges?"

From another quarter comes this inquiry: "There is in my city one of the most beautiful elms I have ever seen. It is stately, perfectly formed and well situated. Is this the kind of material you want for your contest?" Another photographer asks: "I have several unusual forest scenes, but hesitate to enter them in the contest because I have been told only pictures of individual trees will be considered. Is this right?"

These questions are best answered by repeating here the purpose of the competition—to stimulate interest in the beauty of trees in the American landscape. The landscape is made up of single trees, groups of trees and trees in mass, as forest or woodland. To say one is superior in beauty to the other is extremely far-fetched, inasmuch as "beauty" is a relative term. One photographer may find it in a superb specimen, another in the lines of a number of specimens, while still another in the soft graduations of mass. Camera

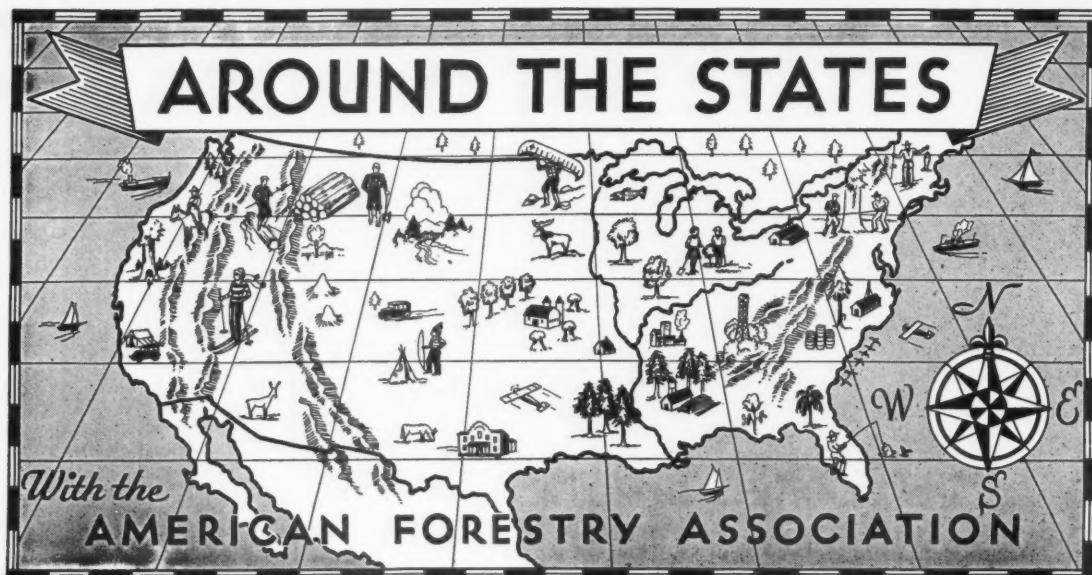
artists may draw from all three for a photographic interpretation of "beauty." The judges will make their awards on the basis of beauty in photographic effect, no matter how the photographer utilizes the tree or trees.

Another question to be raised concerns the award of state prizes. As one photographer asks, "I am living in Vermont but have a number of beautiful western pictures I would like to enter in competition. Will these be considered for the Vermont state prize, or will they be judged with pictures from the state in which they were made?"

The residence of the artist has little bearing on the competition. It is the picture that is being judged. Competition for the Vermont State Certificate of Excellence will be for pictures of Vermont trees and landscapes. The same applies to every other state. Furthermore, the photographer must furnish information as to where and when the picture was made.

Still another photographer wants to know how and where the prize winning pictures will be exhibited. Just before the final awards are made a collection of the outstanding photographs will be exhibited at a gallery at Washington, D. C. Many officials, as well as the public will be invited to view them. The prize pictures will then be selected, made up into a traveling exhibit and routed to various sections of the country.

Eventually, it is planned to give them a permanent location at the headquarters of The American Forestry Association.



## Roosevelt Orders 275,000 Men To Conservation Work Camps By July 1

President Roosevelt on May 12 approved a comprehensive program calling for the placing of 275,000 men in Civilian Conservation Corps Work Camps by July 1. To attain this objective it will be necessary for the War Department to move the men at a greater rate than was maintained by both the Army and the Navy during the World War.

It will be necessary for the Labor Department to select 225,000 young men by June 1. The War Department will have until July 1 to condition and install them in the forest camps, enrolling them at the conditioning camps at the rate of 8,540 a day. Fifty-two thousand men had been selected and enrolled at conditioning camps up to May 12. Of this number, 7,338 had been installed in the forest work camps on both Federal and state work—5,360 in Pennsylvania, 1,766 in Michigan, 212 in Wisconsin, and 200 in Virginia.

Of the total of 1,300 forest camps needed to accommodate the men, 1,082 had been selected up to May 12—811 on Federal lands and 271 on state and private lands.

On the Federal lands 645 camps had been approved in National Forests, seventy-two in Indian Reservations, sixty-three in the National Parks, twenty in Military Reservations, and the remainder on the Public Domain.

On state and private lands, fifty-four camps

had been approved in Pennsylvania, thirty-eight in California, thirty-one in Idaho, twenty-four in Washington, eighteen in New York, sixteen in Iowa, thirteen in Minnesota, twelve in Connecticut, ten in Oregon, six in both Ohio and Louisiana, five each in Michigan, Missouri and Tennessee, four each in Florida, Georgia, New Jersey and Virginia, three each in Illinois and Indiana, two in Rhode Island, and one each in Wyoming, South Carolina,

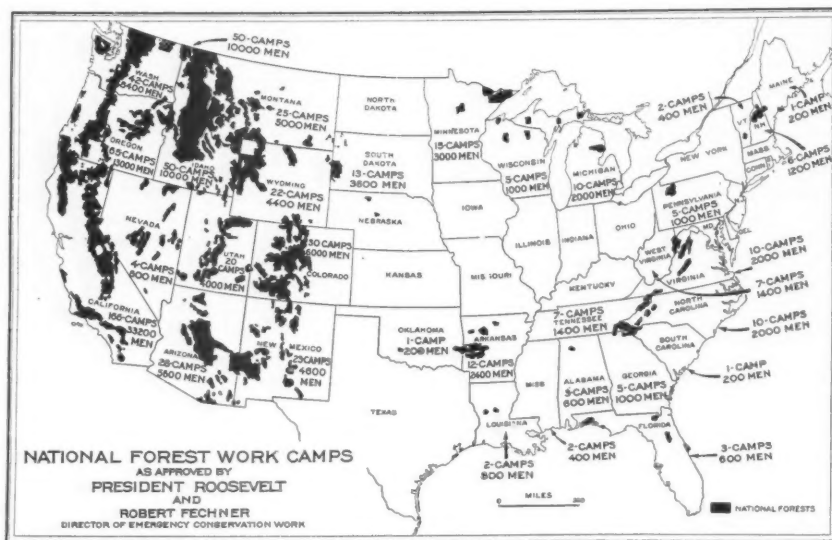
Montana, four each; New Hampshire, three; Mississippi, two; and Delaware, one. State projects in North Carolina, affecting three camps, and in West Virginia, affecting two camps, are being held in abeyance. Nebraska is the only state so far to reject the President's terms.

Under the President's plan, units of the Civilian Conservation Corps can be utilized on state and private lands provided the governors

of the individual states give assurances that they will urge their state legislature to pass legislation providing for reimbursement to the Federal Government up to a maximum of three dollars an acre. No payments are to be made except from profits derived as a direct result of work done by the Corps on state or privately owned properties. The agreement provides "that such profits as are realized will be equally divided between the state and the Federal Government until the state shall have paid for the work done at the rate of one dollar

per man per day for the time spent on projects subject to a maximum of three dollars per acre."

Nearly 130,000 men will be put to work in the National Forests of the country, 107,000 of them in the far west. More than 10,000 men will be used in reducing fire hazards and generally improving the National Parks and



Map showing distribution and location of forest work camps in the National Forests.

South Dakota and Oklahoma.

Twelve states, affecting seventy-one forest camps on state and private lands, had on May 12 failed to take the necessary action for approval. They have until May 25. These states are: Massachusetts, twenty camps; Maine, eleven; Wisconsin, eight; Vermont and Maryland, five each; Texas, Alabama, Kentucky and

National Monuments. Fourteen states will be benefitted by this work, ten of them west of the Mississippi River. Twenty eastern and central military reservations will employ about 4,000 men in road construction, flood control and erosion projects. Most of these locations are in New York and New Jersey.

Work on the Indian Reservations will be somewhat apart from the Civilian Conservation Corps, although serving the same purpose. The Indians themselves will receive first call, and members selected for the work will not be charged against the original quotas established for the states on a basis of population. All details of the relief work on the reservations will be administered by the Department of the Interior through the Indian Service.

At the time of going to press the Forest Service was going rapidly ahead in employing supervisory personnel in administering the work of the Civilian Conservation Corps. Foresters and other technicians are being employed at salaries of from \$75 to \$300 a month, but only when men are not available from the permanent personnel of the Forest Service, the Park Service and other departments concerned. Plans are for one superintendent and several foremen in each camp. It is estimated that the employment of more than 10,000 technically trained foresters and experienced woodsmen will be necessary to carry out the work effectively.

To establish a closer working basis between the Army and the various forestry agencies involved, liaison officers from the ranks of the foresters have been appointed and assigned to each of the nine Army Corps Areas.

F. L. Haines, of the Massachusetts Department of Conservation, has been assigned to the First Corps Area, with headquarters at Boston; Nelson C. Brown, of the New York State College of Forestry, at Syracuse, has been stationed with the Second Corps Area, at Governors Island, New York; F. W. Besley, State Forester of Maryland, is with the Third Corps Area at Baltimore; W. P. Kramer, assistant supervisor of the Pisgah National Forest, Tennessee, is forestry liaison officer with the Fourth Corps Area at Atlanta, Georgia; and Crosby Hoar, assistant regional forester, United States Forest Service, Milwaukee, has been assigned to the Fifth Corps Area, at Columbus, Ohio.

Four other Forest Service officers have liaison assignments. John McLaren, forest inspector, at Milwaukee, attached to the Sixth Corps Area, at Chicago; H. D. Cochran, forest inspector, at Denver, attached to the Seventh Corps Area, at Omaha; John D. Guthrie, assistant regional forester, at Portland, Oregon, attached to the Eighth Corps Area, Fort Sam Houston, San Antonio, Texas; and C. B. Morse, assistant regional forester, Ogden, Utah, to Ninth Corps Area, San Francisco, California.

### Home Rule for Alaska Game

All jurisdiction of laws relating to game and fur-bearing animals except those relating to fur-seals and sea-otters together with all fisheries administration would be transferred from the Departments of Agriculture and Commerce to the Territory of Alaska by H. R. 5205 and H. R. 5209, introduced in the House by Anthony J. Dimond, Delegate to Congress from Alaska. These "home rule" bills were introduced in accordance with Senate Joint Memorial 8 of May 5, passed by the Legislature of the Territory. The bill relating to fisheries, H. R. 5205, authorizes the Governor of Alaska to call an extra session of the Territorial Legislature to accept the responsibility and make plans for carrying out the work. The Memorial published in the *Congressional Record* for May 15, expresses the desire of the Alaska Legislature to terminate the Alaska Game Commission and authorize the Governor to appoint a new commission, two members of which shall be men actively engaged in the raw fur industry.



### BRUSH FIRE IN GENEVA RAGING

GENEVA, O., —A brush and grass fire which had been dormant since Saturday, broke out with a vengeance here tonight and shortly before midnight five acres were burning fiercely.

Hundreds of citizens, powerless to do much, watched the blaze, praying that a north wind would not suddenly come up, driving the flames into the residential and industrial section of the town.

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*Bird-Lore* is the official magazine of the National Audubon Society. It is published 6 times a year; the price is only \$1.50 in the U. S. (\$1.75 in other countries). Descriptive circular on request. Sample copy sent for 10 cents in stamps. (Use the coupon.)

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## Secretary Ickes Speaks on National Parks

At a dinner tendered him by The American Civic Association on the evening of April 19, Secretary of the Interior Harold L. Ickes gave expression to some views regarding National Parks which have been interpreted to indicate the policy which will dictate his administration of the National Park Service. Referring humorously to the efforts of numerous people and agencies to educate him on park matters since his induction into office, the Secretary disclaimed the need for as much education on parks as seemed to be indicated. "I have an idea what a park is and what a park ought to be," Secretary Ickes declared. "I know the difference between a city and national park. I do not think a National Park is a place where you have to sweep up peanut shells every Monday morning."

"If I had my way about National Parks I would create one without a road in it. I would have it impenetrable forever to automobiles, a place where man would not try to improve upon God. I have been twice through Yellowstone in the days before automobiles were permitted. I went through on horseback—slept out—even scorning a tepee and using a tarp sleeping under the frosty stars. The second time I went through, of the twenty-one mornings every morning but three I had to break ice with which to wash. I have also been through Glacier on horseback."

"Crowds and parks are incompatible. Yet I recognize that these are great camping and pleasuring grounds for the people and certain concessions have got to be made and within a certain degree they should be made accessible to the public. And yet I hope that always in the great national parks large sections will be devoted to the people who really know what a park ought to be and that those who visit such sections will appreciate and love nature."

"People who want to travel through the parks should be permitted to do so without dodging automobiles. People who want to fish should be permitted to fish in the parks and should have an opportunity to do so without liability of fishing being destroyed by sewage from upstream."

"I have been told that the beautiful little pool in Yellowstone where you would put a handkerchief down and it would come up in another place has been destroyed by people

who wanted to see how much it would carry through that way. I sometimes think that people should be barred from the parks—so few know how to use them. That applies to city parks as well as national parks. We are not 'park broke' in this country. . . .

"The American people are not educated to the use of their parks. Their idea of wild flowers is to pick them up. Their idea of trees and shrubs is to break them off until there is nothing left but unsightly masses. This is not the idea of the present Secretary of the Interior. You cannot have too many national parks so far as I am concerned. If anyone feels in the mood to buy a few thousand acres and deed it to the Government, I will gladly receive the deeds. I will turn them over to Mr. Albright for his successful administration."

Referring to the report that in the reorganization of federal agencies the National Park Service might be transferred to the Department of Agriculture, Secretary Ickes said he hoped such action would not be taken. "I am very fond of Henry Wallace. He is not only one of the most able men in the national Cabinet, but one who would not love the national parks any better than I would, and I know he would give no better attention to the national parks than I would."

"There are two things that interest me particularly in the Department of the Interior—one is national parks and the other Indians. I think they go together. . . . I do not believe they are going to take the National Park Service away. I have not 'gone fishing' for any other bureaus in any other department, and I am not 'going fishing.' I want to be left alone."

Expressing a love for trees, the Secretary said: "My ancestry is in the foothills of the Allegheny Mountains where I learned to love trees, flowers, and running brooks. I love trees. Outside my sleeping porch in Winnetka is a fine old white oak about 250 years old. In summer I love that tree for its beauty and foliage; in winter I love it even more because of its rugged character. We ought to preserve our trees and teach our people to love them as we do. We ought to preserve the wonderful heritage God has given this country, and we ought to teach people to love that heritage as we do."

## Conservation in Michigan Threatened

Holding that the progress of conservation in Michigan is seriously threatened by economy measures now pending before the state legislature, The American Forestry Association on May 8 called the attention of its Michigan members to the gravity of the situation and urged them to oppose state policies which carry economy to the point of breaking down the State's progress in conservation. The two immediate threats, the Association declared, are: first, the recommendation of the Michigan House Ways and Means Committee that funds available for the Department of Conservation be reduced approximately one-half; and second, a bill introduced by Senator Cutler (Senate Bill No. 161) designed to abolish the present Conservation Commission and in its place give to the Governor complete authority over the members of the Commission and the Director of the Department. "This bill," the Association declared, "opens the door to a political administration of Michigan's natural resources."

The appropriation bill recently reported favorably by the House Ways and Means Committee abolishes the Land Economic Survey and is declared to make impossible the effective functioning of other divisions of the Department of Conservation under which comes forest fire protection, game and fish protection,

geology and forestry. Funds available for State fire protection are reduced to less than one-half of the State's 1930-31 appropriation. The slashing character of the committee's recommendations is indicated by the fact that the amount recommended for forestry for the coming year is \$37,000 as against \$204,000 two years ago, and for State parks, \$58,000 as against \$285,000 two years ago.

In only a single case, the Land Division, does the amount proposed by the committee equal that estimated by the Department of Conservation as essential. It is particularly unfortunate, the Association believes, that no funds whatever are recommended for the Land Economic Survey which is serving not only a state but a national purpose in blazing the way and laying the foundation for land use planning.

Not only Michigan's land use activities, but the State's broad progress in conservation has attracted national attention in recent years and has stimulated conservation activities in other states. Any action within the State, therefore, which will have the effect of wrecking the splendid progress made and of laying the State's resources open to inadequate protection, or to political administration would, the Association holds, be an unwarranted setback to both State and national conservation.

## Community Forest Fire Fighting Equipment Recommended

As a part of its program to help work out practical means for the prevention and control of forest fires, the Forest Committee of the National Fire Protection Association has prepared a set of regulations applying to community forest fire fighting equipment which will be recommended for adoption at the annual meeting of the Association in Milwaukee May 29 to June 1. The Committee's recommendations are designed to apply in regions where settled areas, either permanent or summer communities, are found in or adjoining wooded territory as in many portions of New York and New England. They were compiled by C. R. Tillotson, of the United States Forest Service, and although based largely upon conditions in the Northeastern States, they form a basis for regulations generally applicable to all regions where similar conditions are found. Its report, the Committee states, is believed to be the first attempt to develop a standard of recognized good practice for the guidance of communities confronted with the forest fighting problems.

The regulations include general specifications for hand and power pumps, motorized forest fire trucks, hose, hand tools, housing and care of equipment, and similar matters. Special attention has been given to specifying pumps which are adapted to specific conditions. Differentiation is made between pumps for use in rough and relatively inaccessible, but well watered regions, as compared to country well supplied with open water. The portability of pumps, both hand and power types, is covered and two types of motorized fire trucks are described.

The report of the National Fire Protection Association Forest Committee is available in an advance publication on request to the National Fire Protection Association, 60 Battery-march Street, Boston, Massachusetts.

## Waltonians Urge Broadening of Forest Work Program

Commending President Roosevelt upon his Civilian Conservation Work program and declaring that at one stroke the President has deeply impressed upon the American people the interdependence of forests, waters and mankind, the Izaak Walton League of America at its Eleventh Convention in Chicago, April 27 and 28, urged that immediate steps be taken to include as part of the work program the impounding of waters throughout the plains and prairie states as a flood control and water conservation measure. The League advocated the construction of numerous low dams, deflectors and shelter devices in order that water runoff may be retarded and that the fish carrying capacity of the smaller streams may be increased materially. It was also recommended that the Federal Government make available funds for purchase and reforestation of waste and marginal agricultural lands in states lacking federal areas in order to aid in flood control, farm and unemployment relief and prevention of soil erosion.

Declaring that "the bureau chief is the key to the arch of good administration," the League also passed a resolution urging the President to cover all such positions into the classified service to keep them outside the realm of political spoils. Sheep grazing on federal lands was made the subject of a resolution to the effect that the special Senate Committee on Wildlife Resources be urged to hold hearings to determine the effect of sheep grazing on lands essential in game conservation.

Other resolutions passed by the convention urged that essential federal conservation research be maintained; that better protection for bears be provided; that fishermen stay out

of Florida until the State passes legislation stopping the sale of black bass; that the Kan-kakee Marshes in Indiana be restored; that the Federal Government complete its studies of the waterfowl baiting situation. Further road construction in the Superior National Forest of Minnesota was opposed, as was the recent tendency to tear efficient game and fish departments to pieces for political reasons and to divert game funds.

Officers elected for the ensuing year are: President, Dr. Preston Bradley, of Chicago; Treasurer, Otto C. Doering; Secretary, Fred N. Peet, both of Chicago; vice-presidents, J. C. Bradford of South Dakota, Dr. George M. Opperman of New York, R. D. Lytle of Washington state, Dr. M. D'Arcy Magee of Washington, and Judson L. Wicks of Minnesota.

## Survey of Landscape Values

A nationwide survey to determine regional features of landscape character and beauty still unprotected, has been undertaken by The National Landscape Survey of the American Society of Landscape Architects.

The project, which carries the endorsement of The American Forestry Association, is designed to awaken public realization of the value of landscape beauty as a national asset. It is believed that it will stimulate those who know and live in any region to protect its landscape values, and that it will move those who are unacquainted with the region to greater interest in its beauty and protection.

The survey will provide for state governments a general analysis and evaluation of the scenery of their region, with information as to what different kinds of scenery are typical, where they may be found, and what is the best example of each. It will also provide a criterion of scenic values to aid in determining state preservation projects, and would suggest to private individuals or organizations specific examples of suitable types of landscape features worthy of preservation.

"Although England, through its Council for the Preservation of Rural England, has been working for five years on the preservation of its countryside, no organization in America has attempted similar national efforts," said Bradford Williams, executive secretary of the Society. "There is a need for some group of properly trained and qualified people to examine critically our national and local features of outstanding beauty and character—not only where the landscape survives in its primitive condition, but where the countryside has been changed by the hand—for the purpose of determining what is worth saving, how much can be saved, and what protection should be given."

## New Trees for Roosevelt Estate

President Roosevelt's own reforestation enterprise on his Hyde Park estate in New York will advance this summer with the planting of 36,000 trees, according to the New York State College of Forestry at Syracuse University. A survey of the proposed work has been made by Professors Nelson C. Brown, Svend Heilberg and Ray F. Bower, all of the University.

The plan calls for the planting of 36,000 trees of fifteen species, including Norway pine, European larch, Scotch pine, western yellow pine, Norway, white and Sitka spruce and tulip poplar. More recently the President has experimented with Japanese red pine, Douglas fir, arborvitae, shortleaf pine and black walnut. A Christmas tree plantation is growing with unusual success at Hyde Park.

Reforestation and management of the forest lands at Hyde Park under a cooperative arrangement was initiated in 1929 between Mr. Roosevelt, then Governor of New York, and the University. The college furnishes the trees and supervises the work while Mr. Roosevelt provides the land and labor.

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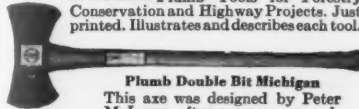
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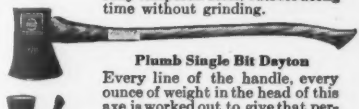
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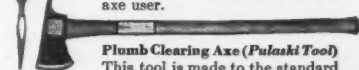
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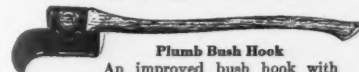
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## Clarke Succeeds Hawley on National Forest Reservation Commission

Representative John D. Clarke, of New York, member of Congress since 1921 and co-author of several important forestry measures, including the Clarke-McNary Act of 1924, has been appointed a member of the National Forest Reservation Commission to succeed Representative Willis C. Hawley, of Oregon. The membership as now constituted is headed by the Secretary of War, George H. Dern, together with Harold L. Ickes, Secretary of the Interior, Henry A. Wallace, Secretary of Agriculture,



Representative John D. Clarke

Senator Henry W. Keyes, of New Hampshire, Senator Walter F. George, of Georgia, Representative Wall Doxey, of Massachusetts, and Representative John D. Clarke, of New York.

The first meeting of the Commission was held on May 12, but with the current appropriation of \$200,000 exhausted and the sum of \$85,854 for the year beginning July first only sufficient to maintain the organization, no specific plans were made.

## Land-Use Committee Again Urges Control of Public Domain

The imperative need for systematic control and management of the unreserved public lands was again emphasized by the National Land-Use Planning Committee, which concluded a four-day conference in Washington on May 9. The Committee reaffirmed its previous position that the principles embodied in H. R. 11816 of the 72d Congress, as that measure was originally reported out on February 7, 1932, by the Committee on Public Lands, provide the essentials of legislation long needed. The amendments subsequently made in the 72d Congress, and repeated in the present House Bill No. 2835, would, in the judgment of the Committee, make effective regulation impossible in practice, and would virtually nullify the beneficial principles outlined in other sections of the Bill. The Land-Use Committee at its meeting again urged enactment of the principles of the measure in the original and unamended form.

There remain in the ownership of the Federal Government, according to the Committee, approximately 176,000,000 acres of unreserved and unappropriated public land, situated almost wholly in the eleven Western States. In addition, there are approximately 60,000,000 acres that have been withdrawn from entry for various purposes, such as mineral lands, stock driveways, nontillable reclamation lands, and water power sites. For most of this vast area the most suitable surface use is grazing. Through lack of regulation, however, this valu-

able natural resource has been allowed seriously to deteriorate. Without regulation, further progressive destruction is regarded as inevitable.

"Such waste," the Committee declared, "should not be permitted to continue. It is the result of a shortsighted policy which in the end benefits no one and which, if continued, will result in reduction of large areas to eroded, barren wastes. The livestock industry of the eleven Western States is not the only interest concerned, for farmers and stockmen of the Middle West and other states to the East rely upon the public range states for large annual supplies of stockers and feeders. Denudation of watersheds, furthermore, increases flood hazards, promotes the siltation of irrigation reservoirs and ditches, and jeopardizes the water supply for irrigation, urban consumption, and other uses.

"These lands are the property of the Federal Government. It is the responsibility, as well as the right, of the Federal Government so to protect, manage and improve these lands as to make them of the highest productive use, to stabilize the livestock industry, to protect watersheds, to check erosion and to control floods. Exercise of this obligation has been prevented through failure to provide the necessary legislation."

## Colorado Forestry Association Meets

The annual meeting of the Colorado Forestry Association was held on April 26 at Denver, at which time S. R. DeBoer, prominent landscape architect and city planner, was elected president; John H. Gabriel, vice president, and Perry L. Clarke, Secretary. In addition, the following directors were elected: Carl Ferguson, Mrs. Clarence Richards, Wm. K. Barr, C. R. Root, Professor W. J. Morrill, and Fred R. Johnson.

Mr. DeBoer stated that the association would work for the establishment of a Colorado State Forest and its management by trained men, according to the principles of forestry. The association will also work to prevent denudation of private forest lands along scenic auto highways, such as along the Echo Lake-Mt. Evans Road. The association will seek to have full consideration given to the recreational development of the Rocky Mountain region not only in the National Forests and Parks, but also in forest areas outside the National Forest boundaries close to towns and cities.

The Colorado Forestry Association has the distinction of being one of the oldest forestry organizations in the United States. It was established in 1884 and through the years has been active in advancing forestry interests in the State. It aided in the establishment of National Forests in Colorado and in creating the position of State Commissioner of Forestry, which later was changed to State Forester.

The position of State Forester, however, has just been abolished as a part of the economy campaign of Colorado's Governor. The legislature recently passed what is known as the Code Bill, providing for a reorganization of the State Government. Among other positions this act does away with the State Forester whose duties are to be assumed on July 1 by the State Land Board, which has no trained forester in its organization. The act in question does not require that a trained forester be used in the management of State land.

This situation has aroused the Colorado Forestry Association to action to the end that the State forest resources may not be depleted or abused and that the present hysteria for tax reduction will not work an irreparable injury to State resources. W. J. Morrill, the present State Forester, will continue as head of the Forestry Department of the Colorado Agricultural College.

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### New Plan for Forest Taxation Recommended

The first conclusions of the important nation-wide study of forest taxation which has been under way for the past six years by the Forest Taxation Inquiry, have been announced by the United States Forest Service. Two plans are recommended, an "adjusted property tax," and a "partial timber exemption."

The adjusted property tax is recommended to counteract adverse effects of tax payments required in advance of the receipts of income which the property tax imposes upon deferred-income forests. It permits a deduction from the assessed value of the timber each year. The deduction is based upon the normal expected increase in the value of the forests. An exception of this occurs in years when the receipt of income cancels the reduction. In other respects the plan retains the form of the property tax together with the stability which it gives to local revenues. It is believed by the Forest Service to be the most satisfactory device yet proposed for amending the property tax to make it suit all conditions of forest practice. It offers substantial relief from excessive taxation of virgin forests while they are being held as reserves for future use.

The partial timber exemption applies to young-grown forests and, under certain circumstances or with certain limitations, to old-grown forests also. Under it a certain percentage of the value of the timber—at a uniform rate for the whole state as fixed in the law—would be exempt from taxation. This plan, according to the Forest Service, would accomplish a rough adjustment of the property tax to the special circumstances of forestry, while necessitating only the minimum of change from the present tax system and requiring only an efficient administration of that system to make it effective.

"It will doubtless be a surprise to those who have been following the progress of forest tax discussion and legislation during the present generation," says the Forest Service, "to find that the Inquiry reports adversely upon the yield tax. This plan, whereby a tax on the yield of forest products when harvested is substituted for the annual property tax upon the value of the trees, has generally been the one most favored and has found its way onto the statute books of a number of states. The Inquiry concludes that the yield tax would prove very defective in practice."

The Inquiry reported adversely also upon the plan of exempting all immature timber from the property tax, as is done in California and as was recommended by a Committee of the National Tax Association in 1922. It also reported adversely upon a number of devices which have found more or less favor among the forest tax reformers. It gives no support to fixed assessments of forest properties or to a specific tax in lieu of the regular property tax. The report insists that all tax laws should be of general application and compulsory, thus disapproving of the optional feature which characterizes many existing yield tax law. Strong disapproval was also directed toward all attempts to make forest tax laws rigid and immune from amendment by future legislation through the expedient of making the law a contract between the state and the taxpayer.

"The conclusions with reference to specific methods of taxing forests are by no means to be taken as covering the entire field of forest taxation," the Forest Service pointed out. "The investigations of the Inquiry have made it clear that forest lands are suffering tax disabilities that are common to rural real estate in general, and to rural real estate in sparsely settled regions in particular. These disabilities are by no means confined to the inherent defects of the property tax. They go back to broad problems of land use and settlement and governmental organization and cost.

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## Book Reviews



**GAME MANAGEMENT**, by Aldo Leopold, with drawings by Allan Brooks. Published by Charles Scribner's Sons, New York. Price \$5.00.

In "Game Management," Aldo Leopold, widely known in game and forest fields, has added to game literature the most advanced treatment of wild life conservation yet published. Leaving behind old dogmas and controversial theories, the author strikes boldly into the field of biological factors and blazes a trail of scientific technique destined to be the highway along which game conservation will move forward to greatest achievement.

"The early attempt to apply biology to the management of game as a wild crop," Mr. Leopold states in his opening chapter entitled *A History of Ideas in Game Management*, "soon disclosed the fact that science had accumulated more knowledge of how to distinguish one species from another than of the habits, requirements, and inter-relationships of living populations. Until recently science could tell us, so to speak, more about the length of a duck's bill than about its food, or the status of the waterfowl resource, or the factors determining its productivity. It has now become more realistic. Scientists see that before the factors of productivity can be economically manipulated, they must first be discovered and understood; that also to build on them a new technique by which the altruistic idea of conservation can be made a practical reality."

Game management, the author defines, as the art of making land produce sustained annual crops of wild game for recreational use. Like other agricultural arts, game management, he holds, produces a crop by controlling the environmental factors. As in forestry it employs natural species relying on partial control of a few factors to enhance the yield above what unguided nature would produce. The crying need at this stage of game conservation, he maintains, is specific definition of the environment needed by each species, and in a most comprehensive and fundamental way he proceeds to point out suggestive techniques by which this lack may be made good. Frankly admitting that few of the techniques described have been sufficiently tested in practice to be safely followed verbatim, the author presents them as examples of how to think, observe, deduce and experiment rather than specifications for what to do. "Few biological arts," he tells us, "depends as much on ingenuity and resourcefulness as this one. It is still in the stage where each practitioner must create his own skill rather than absorb that of others."

In preparing the volume the author gives as its purpose, first, to serve as a text for those practicing game management or studying it as a profession; second, to interpret for the thinking sportsman or nature lover the significance of some of the things he sees while afield with gun or glass; and, third, to explain to the naturalist, biologist, agricultural expert, and forester how his own science relates to game management. Unless this reviewer is badly mistaken, "Game Management" will stand not only as the book of the year but the book of the decade in game conservation.—O. B.

**FIGHTING THE INSECTS**, by L. O. Howard. Published by MacMillan Company. 333 pages. Price, \$2.50.

Well written autobiography is usually interesting and frequently of service in linking together important personages and periods in contemporary history. Dr. L. O. Howard's autobiography describes the life and intimate incidents of a public servant who has devoted himself to science and achieved outstanding success and so it becomes a valuable contribution. For fifty-three and a half years (from 1878 to June 30, 1931) Dr. Howard served the United States Department of Agriculture and saw it develop from a few offices under a Commissioner to one of the great executive branches of the Government. Starting as a college trained office assistant under Dr. C. V. Riley, by persistent study and demonstrated executive ability, he became Chief of the Bureau of Entomology, in which capacity he served for many years.

The book records the life of a scientist who with all of his responsibilities took time to enjoy many of the finer things of life and relieved his burdens with a sense of humor.

—G. H. C.

**THE CULTIVATED CONIFERS IN NORTH AMERICA**, by L. H. Bailey, published by the Macmillan Company, New York. 404 pages, illustrated. Price \$7.50.

A new book, not to be confused with *The Cultivated Evergreens*, by the same author but no longer in the market. This book records about 1,000 species and varieties of pines, spruces, firs, hemlocks, cedars, cypresses, junipers, sequoias, araucarias and other groups grown in the region north of Mexico.

To a considerable extent it is an outgrowth of a long friendship between the head of a great publishing house who has made the collecting of conifers a hobby, and a poet who is an outstanding botanist. Liberty Hyde Bailey, the author, would be the first to give credit to George P. Brett, Chairman of the Board of Directors of the Macmillan Company for the opportunity to present his knowledge on pages which so admirably reflect the printers' art. In fact, in the chapter describing "Experiences with Conifers," Dr. Bailey makes frequent reference to the remarkable plantings on the Brett estate in southwestern Connecticut.

For those who would identify the various conifers, there are keys and carefully prepared botanical descriptions illustrated with line drawings and remarkable photographs. Supplementing these are chapters discussing the use of "Conifers in the Landscape," their "Cultivation and Propagation" together with descriptions and suggestions for the control of insects and diseases which attack conifers. Perhaps the most unique chapter in the book is the compilation of experiences with conifers. Here one may learn how various species have behaved under the specific conditions maintained in some of the older American estates and arboreta.

This new book presents well written authoritative information in a volume of unusual beauty and dignity. Botanists and nature lovers as well as all who would have an intelligent acquaintance with the conifers will increasingly refer to it.—G. H. C.

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### AMONG THE CURRENT PUBLICATIONS

**More Game Birds by Controlling Their Natural Enemies**—Issued by the New York Foundation, "More Game Birds in America." Description of natural enemies—"vermin" or "predators"—of game birds, which destroy countless millions of game birds each year, and of the principles of practice and control of such natural enemies on areas devoted to the propagation of game birds, for the use of those working to increase the number of game birds in America.

**Northern Yellowstone Elk Study**—by W. M. Rush, published by the Montana Fish and Game Commission. The problems involved in the well-being of the Northern elk herd have long engaged leaders of thought in the wild life field, and this is a thorough and detailed report—following a three years' study by experts, of all the conditions affecting the herd.

**Forest Fires—A Menace to Oklahoma's Woodland**.—Oklahoma Forest Service, Oklahoma City. Describes Oklahoma's forest resources, which include 3,350,000 of pine and oak types alone, and presents arguments against woods fires.

**Poisons, Diseases and Medicines**.—Cornell Rural School Leaflet. The major portion of the pamphlet briefly describes sources of poison and disease to which people living on farms or in the open are subject. Common medicinal plants of New York State are described in the last few pages.

**Plants of Rocky Mountain National Park**.—National Park Service, Department of Interior. Prepared by Ruth E. Ashton. Illustrations and keys for identification. A splendid guide for one of the main attractions of Rocky Mountain Park.

**Forestry Lessons on Home Woodlands**.—By W. R. Mattoon and Erwin H. Shinn. Department Bulletin No. 863—United States Department of Agriculture. A valuable pamphlet for the farmer.

**Studies In Indiana Farmwoods**, by Ralph K. Day and Daniel DenUyl. Bulletin No. 368, Purdue University Agricultural Experiment Station. This study, the first in a series being conducted by Purdue University, discusses the natural regeneration of farm woods following the exclusion of livestock.

**1932 Yearbook**, published by the Washington, D. C., Chapter of the Izaak Walton League of America. Activities of the District of Columbia Chapter in 1932.

**You Can Make It For Profit**, by United States Department of Commerce, National Committee on Wood Utilization. Volume III of "You Can Make It" Series. This pamphlet was prepared as an aid in the development of home industries in the United States and contains more than 100 suggestions covering articles for use both inside and outside of the home. Special emphasis has been given to individual requirements so as to avoid competition with merchandise produced on a mass-production scale.

**The Improvement of Weeviled White Pine Plantations**, by A. C. Cline and H. J. MacAloney. Published by the Connecticut Forest and Park Association, 215 Church Street, New Haven, Connecticut. New methods of controlling weevil damage on White Pine plantations.

### Superior-Quetico Project Scores Another Victory

Preservation of shore lines, rapids, waterfalls, beaches and other natural features in the Minnesota lake region was furthered last month by the passage of an act by the Minnesota State Legislature prohibiting the construction of dams or additions to existing dams "in or across any public stream or body of water within or bordering upon those portions of the area in Cook, Lake and St. Louis Counties designated in the act of Congress of July 10, 1930." The area in question embraces the Superior-Quetico Project, and the successful outcome of the legislation is due in large part to the untiring efforts of the Superior-Quetico Council, of which Ernest C. Oberholtzer is president and the most active figure.

The act also prohibits the alteration of natural water levels and easements for flooding or over-flowing lands of the state adjacent to streams and lakes without specific authority first being obtained by act of the State Legislature.

Under the act just passed the State Department of Conservation may authorize the construction of dams for public recreational uses or for logging purposes subject to signed authority of the Executive Council of the State and provided temporary water levels do not exceed the normal highwater mark. Although the act does not apply to water power developments actually occupied and maintained under the terms of the Federal Water Power Act, provided applications for licenses were pending on or before January 1, 1928, the legislation, it is said, will stop further building of dams and flooding of state and federal lands within the area. The Minnesota Power and Light Company has a power plant at Winton near Ely which it has been operating for the past ten years. The company has had pending an application for permission to build five more dams and raise the water thirteen feet higher in Gabbro and Bald Eagle Lakes and Isabella River. While the legislation automatically stops the Company carrying out these plans, it does legalize its right to occupy its present site.

Passage of the legislation which was vigorously opposed by the Power Company is hailed by friends of the Superior-Quetico project as a victory for the public.

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## Conservation Calendar in Congress

Published monthly while Congress is in session as a service to the members of The American Forestry Association. This calendar contains bills introduced from April 1 to April 30, inclusive.

### NATIONAL FORESTS

- H. R. 4943—PIERCE—To authorize the addition of certain lands to the Ochoco National Forest, Oregon. To Committee on Public Lands April 12.
- H. R. 4934—PIERCE—To authorize the revision of the boundaries of the Fremont National Forest in the State of Oregon. To Committee on Agriculture April 12.
- S. 1506—STEIWER—To amend the United States Mining laws applicable to the Mount Hood National Forest within the State of Oregon. To Committee on Agriculture and Forestry April 22.

### PUBLIC DOMAIN

- H. R. 5082—CHRISTIANSON—To repeal the homestead, preemption, and desert-land laws of the United States of America and all laws or parts of laws amendatory thereto providing for the transfer of public lands to individuals for agricultural purposes. To Committee on Public Lands April 20.

### RELIEF

- H. R. 4888—SCHRUGHAM—Amending the Emergency Relief Work Act of March 31, so as to authorize the President to provide for employing citizens of the United States in the discovery and development of the mineral resources of the public lands of the United States. To Committee on Labor, April 11.
- H. R. 4606—LEWIS—To provide for cooperation by the Federal Government with the several States and Territories and the District of Columbia in relieving the hardship and suffering caused by unemployment. Passed House April 21. Passed Senate May 1. To Conference May 3. (Identical with S. 812.)

### REFORESTATION

- S. 1272—NORRIS—To improve navigability and provide flood control of the Tennessee River; reforestation and proper use of marginal lands in Tennessee Valley; agricultural and industrial development of said valley; national defense by creation of corporation for operation of Government properties in and near Muscle Shoals in Alabama. Reported favorably in Senate April 12. Similar to Hill bill, H. R. 5081, which passed House April 25. Passed Senate May 3.

### WILD LIFE

- H. J. Res. 140—GROWE—To authorize a compact or agreement between Kentucky and Indiana with respect to hunting and fishing privileges and other matters relating to jurisdiction on the Ohio River. To Committee on the Judiciary April 3.
- S. 1138—WHEELER—Authorizing transfer of an unused portion of the United States Range Livestock Experiment Station, Montana, to the State of Montana for use as a fish-cultural station, game preserve, and public recreation ground. To Committee on Agriculture and Forestry April 4.

reaction ground. To Committee on Agriculture and Forestry April 4.

- H. R. 5209—DIMOND—Extending the legislative power of the Legislature of the Territory of Alaska to include game laws and laws relating to fur-bearing animals applicable to Alaska, and transferring the jurisdiction, supervision, administration, and control of the game and fur-bearing animals of Alaska from the Department of Agriculture to the Territory of Alaska. To Committee on Territories April 24.

### INDIANS

- H. R. 5083—CHRISTIANSON—Providing for the payment of \$100 to each enrolled Chippewa Indian of the Red Lake Band of Minnesota from the timber funds standing to their credit in the Treasury of the United States. To Committee on Indian Affairs April 20.
- S. 1513—MCNARY—To amend Public Act Numbered 435 of the Seventy-second Congress, relating to sales of timber on Indian land. To Committee on Indian Affairs April 24.

### EROSION CONTROL

- H. R. 4594—CROSSER—To relieve unemployment by providing the building of check dams and other structures to prevent soil erosion, gullying, floods, and drought by retarding the run-off on watersheds and causing the waters to soak into the ground in order to replenish springs and wells and to restore subsoil moisture. To Committee on Agriculture April 4, 1933.
- H. R. 4595—CROSSER—To promote interstate welfare by providing for development and control of waterways and water resources, for water conservation, for flood control, prevention and protection; for application of flood waters to beneficial uses; and for cooperation in such work with States and other agencies. To Committee on Rivers and Harbors April 4.

### NATIONAL MONUMENTS

- H. R. 4342—MONTAGUE—To provide for the acquisition by the United States of the Studley estate where Patrick Henry was born.

### MISCELLANEOUS

- S. 1142—SHEPPARD—To provide industrial and agricultural communities for the absorption of unemployed citizens of the United States and for issuance of self-liquidating bonds for the establishment thereof. To Committee on Agriculture and Forestry April 4.
- H. J. Res. 149—MCREYNOLDS—Authorizing an annual appropriation for the expenses of participation by the United States in the International Institute of Agriculture at Rome, Italy. Reported to House April 14, Report No. 44.
- S. Con. Res. 1—WAGNER—For the designation and appropriate observance of American Conservation Week. To Committee on Public Lands and Surveys, April 7.

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## FORESTRY IN CONGRESS

With the appearance of the two-volume Copeland Report, published as Senate Document No. 12, entitled "A National Plan for American Forestry," prepared in response to Senate Resolution 175 of the 72nd Congress, there is a growing demand for legislation which will make effective the recommendations in the Report. These apply particularly to the proposed increase of 224 million acres in public forests, to accomplish which federal and state legislation authorizing land studies with a view to new purchase areas, as well as actual appropriations for the acquisition of land, will have to be passed. There must also be a material increase in appropriations for protecting the 191,000,000 acres not now under any plan of fire protection, and for accelerating the forest planting program from about 155,000 acres to over 1,000,000 acres each year.

Passage of the Muscle Shoals Bill in both Houses of Congress promises to focus attention upon federal and state acquisition of several million acres of forest land on critical watersheds. The Hill Bill (H. R. 5081) which was amended in the Senate in accordance with the desires of Senator Norris after passing the House, has been in conference. The differences relate to the production of power and fertilizers and the transmission of power by the Federal Government.

The first piece of legislation to be completed since the Act providing for Emergency Conservation Work was signed by President Roosevelt on March 31 is the Wagner-Lewis Bill (H. R. 4606) authorizing \$500,000,000 to be distributed to the States through the Reconstruction Finance Corporation, for relief of unemployment. The bill was signed by President Roosevelt on May 11 and became immediately effective. There are possibilities that some of these funds may be used for the purchase of forest land by the States, thus increasing the area upon which Emergency Conservation Work can be conducted.

On April 17, Senator Sheppard of Texas introduced an amendment to S. 509 to clarify and broaden the activities of the Reconstruction Finance Corporation as authorized in the Emergency Relief and Construction Act of 1932. To paragraph four of Section 201 (a) in the original Act, which authorizes the Reconstruction Finance Corporation to make loans to private limited dividend corporations for the protection and development of forests and other renewable natural resources, the Sheppard amendment would add, "and any such private limited dividend corporation receiving a loan may with the approval of the Reconstruction Finance Corporation, use all or part of the money borrowed to acquire, or build and operate, process plants on or in the vicinity of the forest farms underlying the project, and may use part of the money borrowed in marketing the forest products harvested, and/or may use part of the funds borrowed in the acquisition of lands."

Two applications made for loans under the Act have failed to secure approval of the engineers and legal advisors of the Reconstruction Finance Corporation because the clause does not clearly authorize the use of the funds for operating plants or for purchasing forest lands. The Sheppard amendment may open the way for federal loans at low interest rates over comparatively long periods for forest development purposes.

The Everglades National Park bill, as introduced jointly by Senators Fletcher and Trammell, was favorably reported by the Senate Committee on Public Lands and came up in the Senate calendar on May 8. Previous

to delaying the bill on objection of Senator King of Utah, its passage was urged by Senator Ashurst of Arizona, who said, "It may be that the administration of this park will lead to some expense, but it will be well worth the expense. It will be a monument to the idealism of our nation and a delight to those who seek to preserve one of the most interesting spots on the globe." On objection by Senator King, however, the bill was passed over but may come up again before the close of the present session.

An act authorizing the Secretary of the Interior to modify the terms of existing contracts for the sale of timber on Indian lands was before the Senate on May 8. As stated in Public Act No. 435, reduction of existing timber sale contracts are limited to prices that are not below the basic sale prices. According to Senator Steiwer of Oregon, there are some cases on the Klamath Indian Reservation where the basic sale price established in the contract is still one to three dollars above the existing market, with the result that timber sale contracts are not being completed, and Indians who are dependent upon revenue from the timber are without means of support. Upon objection from Senator King, who questioned if this is not a scheme to evade contracts and to relieve white contractors and companies from obligations which they entered into with their eyes open, the bill was passed over, although Secretary Ickes urged its early enactment.

### William T. Cox Dismissed

By a vote of three to one, the Minnesota State Conservation Commission, on April 23, dismissed William T. Cox, Commissioner of Conservation since August, 1931. Mr. Cox has been under suspension since February. Twenty-nine charges were lodged against him, the most serious being inefficiency and lack of executive ability.

The dismissal was voted at the conclusion of a public hearing. The three members of the Commission voting for the removal were John R. Foley, of Wabasha, Richard R. Bailey, of Virginia, and Frank Yetka, of Carlton, recently appointed member of the Commission. Ernest R. Reiff, of St. Paul, voted against removal.

The action of the Commission followed Mr. Cox's refusal to submit to questioning on the unanimous request of the Commission that he answer questions relating to the charges made by the Commission and the answers filed by Mr. Cox. The deposed Commissioner contented himself instead with reading a statement, explaining it was in the nature of a supplemental answer to the charges made against him at the time of his suspension. "I can see no useful purpose to be gained by continuing this discussion and going into a multitude of details which might be confusing and serve to conceal the essential facts that I have tried to make clear," he said in refusing.

The original answer to the commission's charges was filed by Mr. Cox shortly after his suspension took effect.

In his statement read before the hearing, Mr. Cox said: "It is evident that the fundamental difference between a majority of the members of the Commission and myself was whether the Department should be run along business and scientific lines or along political lines. I endeavored to conduct the Department along business and scientific lines and I have not been willing to yield my principles of true conservation to political expediency. I expect to continue my interest in conservation."

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## THE MORNING MAIL

Selected Comments From The Association's Post Bag

"It seems to me that the summary of the Copeland Report, contained in the article 'Forest Situation Exposed,' in the May issue of AMERICAN FORESTS, should be placed among the Articles-of-the-Month. It is so concise, so clear, so interesting, so understandable, that every newspaper-reading American should have an opportunity to study it. Reducing such a lengthy report to a short and readable form is journalistic service of the highest order.

"Even were I to destroy previous issues of AMERICAN FORESTS, which I have no intention of doing, the May issue of 1933, with its splendid article, 'Forest Situation Exposed,' would go on permanent file."—JOHN HAEFNER, Muscatine Junior College, Muscatine, Iowa.

\* \* \* \*

"I am heartily in favor of your plan to enlarge your magazine to allow space for describing the work and general activities of the Conservation Corps Camps.

"If you should have a section of your magazine devoted to Conservation Corps subjects, having one or two leading articles and as many lesser articles as space would allow, also with photographs pertaining thereto, I am certain that it would stimulate interest among the men on the job."—J. O. STEGER, Colonel, A. G. D., Headquarters Seventh Corps Area, Omaha, Nebraska.

\* \* \* \*

"The idea of having part of the magazine devoted to articles on Civilian Conservation Corps camps, is a particularly good one."—H. H. MALVEN, JR., Major, A. G. D., Headquarters Eighth Corps Area, Fort Sam Houston, Texas.

\* \* \* \*

"The copy of the Emergency Conservation bill received from your office this morning is an evidence of the helpful cooperation that we receive and need."—PHILIP W. AYRES, Forester, Society for the Protection of New Hampshire Forests, Boston, Massachusetts.

\* \* \* \*

"On page 216 is a misstatement regarding longleaf pine (as I read the text) although Sargent makes the same statement your writer does and likely was the source of it. Here are the facts:—

"Longleaf is just now getting its 1933 foliage into working order. The foliage of 1931 and 1932 is on the trees at this time. The foliage now coming on will fall off (if not before burnt off) in the autumn of 1935."—AUSTIN CARY, Lake City, Florida.

\* \* \* \*

"How in the world it is that any set of sane men can be so dumb as to want to have the Forest Service taken away from the Department of Agriculture, where it properly belongs as does everything that pertains to plant and tree growth, I cannot conceive.

"Beyond all question the proper handling of the forests of the United States has quite as much to do with a sensible program of land utilization as any other allied subject could

possibly have. I have personally seen enough of some thirty-four states of the Union to know that there is not one of them but has wasted and mis-used their forests and have denuded and wrecked hundreds of thousands of acres of land that never should have been used for any purpose except the growing of forest trees. Every mile that I travel away from my office these days presents to my view hundreds of acres of land of this very description. I am, therefore, very glad to know that there is a prospect that enough cool heads can be found when it comes down to the pinch to make it possible to have the Forest Service retained in the Department of Agriculture, which is the only Department of the Federal Service where it has any business at all.

"I regret exceedingly that the prospect of heavy cuts in the research funds of the Service are likely to occur."—W. D. TYLER, Clinchfield Coal Corporation, Dante, Russell County, Virginia.

\* \* \* \*

"We have taken AMERICAN FORESTS for several years, and enjoy it immensely, especially the 'Boys' and Girls' page. It is the most helpful and constructive magazine I know of."—MRS. O. R. JOHNSON, Guardian, University of Missouri, Columbia, Missouri.

\* \* \* \*

"Your May issue (1933) was a 'humdinger'—the best, I think, you have ever issued."—AXEL OXHOLM, Director National Committee on Wood Utilization, Department of Commerce, Washington, D. C.

\* \* \* \*

"I enjoyed the article 'Reclaiming Tennessee Lands' by R. S. Maddox very much since we worked together on the projects described. In addition to enjoying his writing I received substantial information and inspiration by reading carefully practically every article in this issue. I find it a superb publication fostering the conservation of our forests and wild life."—HOMER HANCOCK, Echo Valley Stock Farm, Lebanon, Tennessee.

\* \* \* \*

"The May (1933) issue of AMERICAN FORESTS has just come to my attention . . . The moonlight pictures, and the picture of the birches, are exceptional reproductions of unusual pictures. You are to be congratulated on the lay-out and artistic effects of this issue."—R. J. ALDEN, 250 Park Avenue, New York City.

\* \* \* \*

"It was good to see a copy of AMERICAN FORESTS again. It is a most interesting magazine."—W. M. CLARK, Bessemer Galvanizing Works, Bessemer, Alabama.

\* \* \* \*

"The magazine always brings a fresh breeze from the Big Outdoors; certainly the May issue was inspired—both articles and illustrations."—EARL GODWIN, National W. C. T. U., Evanston, Illinois.

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## Ask the Forester?

Forestry Questions Submitted to The American Forestry Association, 1727 K St., N. W., Washington, D. C., Will be Answered in this Column. A Self-Addressed Stamped Envelope Accompanying Your Letter will Assure a Reply.

**QUESTION:** Please advise me how I can collect seeds from cedar, ash and poplar trees.—A. P. R., South Carolina.

**ANSWER:** Gather the seeds of cedar, ash and tulip poplar in the fall and store dry ready to plant in the early spring. In gathering cedar seeds take the entire cone or berry. After drying separate the seed from the scales. Store in a dry place through the winter and plant in the early spring as one would garden seed.

**QUESTION:** Can you give us some advantages of birch wood over other varieties of wood for burning in fireplaces in the home?—E. B. B., Pennsylvania.

**ANSWER:** The chief claim for paper birch as a fireplace wood is its beauty, its easy burning qualities and the fact that it develops a good bed of live embers and has relatively little ash. Paper birch (*Betula papyrifera*) has a fuel value when air dry about seventy per cent of that of a ton of coal, and weighs thirty-nine pounds to the cubic foot or approximately 4,000 pounds to the cord. A cord measures 4'x4'x8' and has approximately ninety cubic feet of solid wood.

Gray birch (*Betula populifolia*) is lighter and has slightly less fuel value. It does not have the clean fresh appearance of paper birch.

Sweet birch and yellow birch (*B. lenta* and *B. lutea*) have darker bark with less of the papery appearance. They are each considerably heavier than the two light barked birches and have a higher fuel value but are less than that of coal.

Sweet birch is not as showy in the fireplace but has higher fuel value and makes more lasting embers. It has an odor of wintergreen, especially noticeable in fresh cut woods.

None of the birches have as high fuel value as hickory, which weighs fifty pounds to the cubic foot and has ninety-eight per cent of the fuel value of coal. White oak comes next in fuel value and hard maple and beech compare favorably with yellow birch.

**QUESTION:** What is the area of forest land in the United States that has been planted?—E. R., Idaho.

**ANSWER:** The total area of planted land within the continental United States is now about 2,000,000 acres.

**QUESTION:** Why is the sap of the sugar maple so different from that of other maples?—K. S., Pennsylvania.

**ANSWER:** All maples produce sweet sap

which can be boiled down to make sugar. The hard or sugar maple, however, furnishes seventy-five per cent of the commercial syrup and sugar produced in this country and Canada.

**QUESTION:** I am interested in learning about the Lignum Vitae, *Guaiacum Sanctum*, of Key West, the Bahamas and Cuba, especially the approximate supply of this compared to *G. Officinale* and the Columbia species *G. Arboreum*. Is there any marked characteristic distinguishing the two species? Is it true that the genuine Lignum Vitae grows in Central America along with Balsa and that wherever Balsa is found *G. Officinale* will be?—L. H., California.

**ANSWER:** This question was discussed with Tom Gill, author of "Tropical Forests of the Caribbean," published in cooperation with the Tropical Plant Research Foundation. According to Mr. Gill there is practically no difference in the wood of the three species of Lignum Vitae. They can be distinguished by their leaves, but the wood is frequently confused by wood technologists. The three are invariably lumped together in commerce. *Guaiacum Sanctum* is the most common, with *G. Officinale* next. These two together are probably ten times as abundant as *G. Arboreum*. Botanical information regarding the three is incomplete. *G. Officinale* is not necessarily found with Balsa. The latter seeds in after fires as Aspen does in our northern states. Its distribution is more widespread than Lignum Vitae and it grows without reference to it.

**QUESTION:** Please tell me regarding a Philippine wood which has been reported as being about half the weight of Balsa and generally called Gumaan.—L. H., California.

**ANSWER:** Professor Samuel J. Record of the Yale Forest School identified this as probably *Alstonia spathulata* Blume of the family Apocynaceae which is reported to grow in Micronesia. No specific details concerning the wood were available.

In reference to a question from F. P. A., Pennsylvania, published in AMERICAN FORESTS for September, regarding the hardness of Araucaria, State Forester W. S. Taber of Delaware writes, "I have seen specimens of this tree growing out of doors in Victoria, British Columbia, and I know of one growing out of doors, in, however, not an exposed situation, less than three miles south of the Pennsylvania line near Wilmington, Delaware. This particular tree has been out of doors since 1924.

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It's light in weight and easy to carry. Fitted with F7.7 Anastigmat Lens and Automatic Shutter; takes Standard Brownie No. 2 film and makes 12 pictures to the roll 6 x 6 cm.

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Byron Gray, Frances Gray, Mazda, Vista Blue and Ambassador were growing side-by-side in the same bed. One hundred fourteen flower-lovers compared them by secret ballot, none of them knowing the origin of any of them. They gave Ambassador 373 credits, Mazda 366, Vista Blue 435, Byron Gray 459 and Frances Gray 603. James Hudelson has attracted more attention than any other iris in my garden, containing more than 100 of the world's very best irises, and followed closely by Mrs. S. M. Hudelson.

	Others' 1932 Prices	My 1933 Price
Byron Gray—44", vigorous, large blue violet, yellow beard, fragrant.....	\$15.00	\$1.50
Frances Gray—40", very large orchid, yellow beard, fragrant.....	20.00	2.00
Mazda—36", Hyssop Violet and Road's Violet, yellow beard; shines.....	10.00	1.00
New Windsor—38", very large, old rose, unusual markings, yellow beard, fragrant.....	20.00	2.00
James Hudelson—over 50", Ageratum violet and blackish red purple, unusual substance and finish, long season, fragrant.....	10.00	1.00
Mrs. H. M. Hudelson—36", purest white shading to Chinese blue at throat. Admired by all.....	7.50	.75
Mrs. S. M. Hudelson—44", wonderful substance and finish, dusky purple, S. lighter, long season, fragrant.....	7.50	.75
Vista Blue—36", immense flowers, violet blue, falls darker, strong, well branched.....	10.00	1.00
Elizabeth Jane—34", richest yellow and brown mahogany unusually combined.....	5.00	.75
Rosa Ring—36", the vigorous "red iris", fragrant.....	3.00	.25
Ruby Ross—34", red gold standards, falls a true red, pretty, fragrant.....	3.00	1.00
Special—48", Immense Dark Blue Self.....	10.00	1.00

The set of 12 for \$12.00, and I will include one Krinkles, 1933 introduction, equal to New Windsor, which it resembles but is darker and the standards so ruffled and crinkled as to look almost wooly. In normal times, worth \$20.00.

— \$2.00 Orders Delivered —

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## COMMENTS ON THE COPELAND REPORT

(Continued from page 259)

interest by recovering some of the alienated land, including not only barren and denuded farms and denuded forest land but also much virgin timber which private owners cannot carry or cannot properly care for under present taxation and other heavy fixed charges.

The acquisition of uncut forest land is the best solution of the problem of insuring an unfailing supply of large saw-timber. Such trees take a hundred years to grow. Private owners cannot afford to grow or keep them and taxes and capital carrying charges are forcing unneeded cutting.

If the 224 million acres mentioned in the Copeland report were acquired promptly the business effect on the forest industries would be favorable. A considerable part of the wasteful, inefficient and excessive exploitation of woodlands at present is on just such areas as would be taken over—areas where new and immature growth is cut too soon and disposed of without regard to price, thus demoralizing present markets and preventing the full realization of natural regeneration of the forests, which even now is proceeding at a rate which, if duly safeguarded and promoted, gives assurance of dependable supplies of timber forever.

In this way the natural regeneration of the forests is held back; and at the same time new growth, through premature harvesting, actually operates to compel wasteful, competitive utilization of mature timber. The thousands of small sawmills which are consuming immature forests before their time are simultaneously handicapping the intelligently planned conservation of the old growth. Government acquisition of this second-growth land would at once promote conservative utilization of mature forests in private ownership and promote the natural reproduction of forests, which, if maintained and assisted by deliberate management, will insure a perpetual timber supply.

## Slattery Named Assistant to Ickes

Harry A. Slattery, for years secretary of the old National Conservation Association which in 1923 was merged with The American Forestry Association, and more recently associated with Governor Gifford Pinchot in conservation activities, was on May 13 appointed personal assistant to Secretary of the Interior Harold L. Ickes.

A native of South Carolina, Mr. Slattery recently observed his twenty-fifth year of public service in conservation. As a young man he was associated with Gifford Pinchot in the famous Ballinger revelations, and in the progressive movement which followed, because of



Harry A. Slattery

his battle to protect the public lands, was called into conference with progressive leaders of the House and Senate.

It was Mr. Slattery who pointed out the undercover conspiracy of private operators to get control of government oil lands which started an oil probe. A great deal of the public interest in Boulder Dam and Muscle Shoals was due to his work. He also took an active part in drafting the Federal Power Act, and legislation dealing with the Federal power policy.

Mr. Slattery was a friend and lieutenant of President Theodore Roosevelt, and during the Wilson Administration he served as special assistant to Secretary of the Interior Franklin K. Lane. In 1928 he again became associated with Governor Pinchot in Pennsylvania, later becoming counsel and executive of the National Boulder Dam Association. In 1931 he was once more in Pennsylvania where he assisted in the investigation of public utilities.

In the words of the late Senator R. M. LaFollette, "he is one of our finest public servants without portfolio." Mr. Slattery's wide-spread activities and interests place at his command information and experience that will be invaluable in his new duties.

## Frank T. Bell Named Head of Fisheries Bureau

Frank T. Bell, of Seattle, Washington, was appointed Commissioner of the United States Bureau of Fisheries, on April 14, succeeding Henry T. O'Malley who having served with the Bureau since 1897, was promoted to Commissioner in 1922.

Commissioner Bell was born in Missouri, graduated from Indianole College, Oklahoma, and has resided in the State of Washington since 1906.

## FOREST THEATRES

(Continued from page 246)

will include delicately graduated modulations, a hint of the suffusions of light and deep velvet shadows resulting from interior hidden lights, or moonlight. Impressions of twilight, dawn, or of well diffused sun glow may also be requisite for certain scenes. "The object of artistic lighting is neither to emulate daylight or obliterate night. It is to reveal aspects of the subject not apparent by daylight and to enhance the qualities peculiar to night. Thus it is at one and the same time a practical necessity and a means of expression. A dark structure of tree trunks and foliage against a light background are characteristic of night, being both natural at night and possible at no other time. It involves no more than lighting the interior while leaving the exterior relatively dim."

Access to these sylvan theatres will be by trail or road, and in the event of the site being near water, by boat. Trails should be clearly enough defined and yet reveal as little as possible man's work upon them. In the case of steep, climbing trails, comfortable, primitive and unobtrusive seats might be introduced at intervals to rest the aged and less hardy. Roads should terminate at well positioned, ample parking spaces, preferably partially concealed, such areas to be sufficiently removed from the theatre to effectively minimize the sound of motors and horns and to eliminate the odor of gasoline. Waterside theatres will require some sort of harbor and piers to accommodate boats. The entire subject of traffic and parking should be so deftly handled as to insure that the audience when settled in place can enjoy the feeling or the illusion of being in a remote mid-forest.

One can share in imagination the experience of thousands of outdoor devotees in their glad pilgrimages to woodland theatres for their delight in the drama, pageants and music. The Mountain Theatre on Mt. Tamalpais, where plays have been held each year since 1913, may serve as an example. Assembling from cities and towns on both sides of San Francisco Bay, the majority relish the ocean breezes and beauty ever changing in mood during the half hour ferry crossing to Sausalito, after which electric trains speed them to Mill Valley or other friendly hill towns like Kentfield and Ross, from which they begin the climb of two thousand feet to the theatre. Most of these robust enthusiasts carry their luncheons for the event comprises a long, full and adventurous day. There is such variety in the trail routes ascending that a choice can be made between strolling along a pipe line under the deep shade of the redwoods, toiling up steep, rough fire trails, ridges of sunburt stone, or along the site of the old Tamalpais winding railroad, now abandoned. With each hundred feet of rise the horizon widens while the pure ozone and increasingly lovely vistas bring fresh exhilaration. The theatre is generally attained at the noon hour. At the last play in May of 1932, Rob Roy was produced and as the turns in the trail were rounded even quite far distant from the amphitheatre the lively notes of bagpipes and fifes echoed over the mountain flanks. This play bowl, perfectly protected from west and north winds by a fir forest, can also be easily reached by automobile via several routes, and ample parking space is provided only a few hundred feet removed from the site.

A holiday sense of freedom and lively anticipation pervades while the audience gradually increases. One group seeks a shady spot under a sheltering oak; another a strategic position along the stone fronted terrace comprising the front row of seats; still another yearns for the open sunshine or a high place offering a wide survey of the entire theatre picture. While this mountaineer audience enjoys its

picnic style repast in a spirit of revelry and comradeship, the stage preparations are eagerly observed while the actors, colorfully costumed, make occasional sallies from their forest hidden dressing rooms. At two o'clock attention and quiet are courteously requested and the play begins, the observers feeling themselves quite a part of the scene and of the whole production. The acoustics are excellent and the maximum of pleasure is assured all those who listen attentively. But besides the play, its action and voices, its music and dancing, there is the low music of soft winds through the firs, refreshing beauty in all of the surrounding native trees, the deep blue sky and a genial sun above. Stretching far, far southward, sloping ridges, the gleaming San Francisco Bay, towns and cities with sheer hills behind them, unite in a prospect of exalted creation, changing every moment in delicate values and dwelling long afterward in cherished memory.

As a result of intimate observation of California outdoor life during more than a generation the author is surprised that more use is not made of our excellent existing theatres and that so many admirable sites for potential, new and similar works remain untouched and undeveloped. Forest theatres might be originated in ideal situations in Richardson and various other redwood groves which are already a part of the State Park System, in Humboldt and Del Norte Counties. Other locations of kindred worth, not yet publicly owned, are known or may be discovered among the redwood groves of Marin, Sonoma and Mendocino Counties, and in both oaks and redwoods of San Mateo, Santa Clara, Santa Cruz, and Monterey Counties. The pines in the mountain lake region of the National Forests of San Bernardino County offer more fine sites and settings.

Theatres in the open, especially those situated in groves, are susceptible of such treatment as may intimately blend them with nature, and also offer a high degree of receptivity and inspiration. Mingled with the spell of the play other feelings are awakened. Trees with tall, straight shafts and others with gnarled and twisted trunks, massed with abundant foliage effect a sense of enclosure besides imparting something of their cool depths and mysterious essence. Daylight is subdued in an auditorium among lofty patriarchs when far sky openings reveal the azure of infinite distance. But what a contrast by night when so much of the woodland life is dormant, hushed. Then one can marvel at the theatre ceiling, a design of supreme magnificence, whence stars of inexpressible brilliance pierce the dark pockets of the innermost forest. By their lustre and magnetic force they seem to lift one to their realm of austere grandeur, wherein, adhering to the rhythmic order of vast systems, each follows its appointed course, singing through illimitable space.

### Idaho, Massachusetts and Washington Appoint New Forest Officers

At the time of going to press announcement was made of three changes in State forestry organizations. A. W. Middleton has been appointed State Forester of Idaho to succeed Ben E. Bush who has held the office since it was created in 1925. Prior to that time he was State Land Agent. The State Forester will continue to be located in Moscow.

Samuel A. York, by appointment of Governor Ely, has succeeded W. A. L. Bazeley as Commissioner of Conservation in Massachusetts.

T. S. Goodyear has been appointed State Supervisor of Forestry of the State of Washington to succeed George C. Joy who resigned on April 1. Mr. Goodyear is a forestry graduate from the Washington State College and has been Assistant State Forester for eight years.

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## PLANTING THE PRESIDENT'S TREE

By ALICE WATTS HOSTETLER



Sea Scouts put soil on the Roosevelt tree while Thomas P. Littlepage, president of the Washington Chamber of Commerce, and Scout Executive Robert E. Myers look on.

WASHINGTON Boy Scouts proudly planted in the National Historical Grove on April 22, a tree which bore the label, "Nursery stock shipped at the special request of President F. D. Roosevelt from his Hyde Park Estate." Attired in the natty blue uniforms of Sea Scouts, a troop headed by Scout Commissioner Curtis Cooper planted the tree, which took precedence among the dozen planted at the ceremony on the 101st anniversary of the birth of the man who established Arbor Day—J. Sterling Morton. Six other American Presidents and as many scenes important historically were honored by living monuments in the grove of "Trees of Tradition," set apart in Anacostia Park last fall when The American Forestry Association and its fellow cooperators, Boy Scouts of America, the Department of Agriculture, and American Walnut Manufacturers' Association, were given this privilege by the director of Public Buildings and Public Parks of the National Capital.

Mr. Thomas P. Littlepage, president of the District of Columbia Chamber of Commerce, Mrs. Rose Gouverneur Hoes, great granddaughter of President Monroe, and her son, Mr. Lawrence Hoes, Mrs. James H. Dorsey, Mr. Robert Woods, Scout Executive Robert E. Myers, C. A. Reed, associate pomologist of the Department of Agriculture, and G. H. Colling-

wood, forester of The American Forestry Association, participated in the program.

The trees from historic grounds which composed this second planting in the National Historical Grove were sent to the National Capital by Boy Scouts and others interested in conservation. Mr. Frank C. Littleton, who owns Oak Hill and is an authority on Monroe history, made available the walnut tree from the Virginia home where the message to Congress containing the Monroe Doctrine was written. The descendant of the tree under which Washington took command of the Continental Army at Cambridge was presented by Mrs. Dorsey of Baltimore. Boy Scouts and their friends sent trees associated with Presi-

dents Harding, Jackson, Johnson, and Buchanan, and from Arbor Lodge, Nebraska; Concord, where the shot was fired heard 'round the world, the homes of Sam Houston and Daniel Webster, the grave of Governor Hogg of Texas, and from Cache Valley, Utah, made famous by Jim Bridger and other pioneers.

At a tree planting conducted in the National Historical Grove the following Saturday, a pecan from the home of the founder of Girl Scouts, Juliette Gordon Low, and two seedlings from other Savannah, Georgia, shrines were set out at a ceremony under the direction of Washington Girl Scouts.



Mr. Littlepage, who spoke at the Arbor Day celebration, has a farm in Maryland containing one of the finest plantings of nut trees in the East. He is recognized as an authority in that field as in the law. "You can build a house or even a magnificent building in a period of months," he told the assembled scouts and guests, "but it takes years to grow the trees which are an adornment to the works of man. And without trees there can be no real beauty." With an appreciation for fine buildings, Mr. Littlepage pointed out that trees lend the touch that makes the Nation's Capital one of the most beautiful in the world. A nursery where seeds from historic grounds will be grown into trees for future tree planting ceremonies has been established on a section of Mr. Littlepage's farm.

Singularly significant was the planting of the President Monroe tree by direct descendants of this American President. The little tree was grown at the home of James Monroe among trees which were planted under his instructions.

Poughkeepsie Boy Scouts went to Krum Elbow, the Hyde Park home of President Roosevelt, to obtain the tree which their leader in the White House presented to them. The President, who is honorary head of Boy Scouts of America, has been an active participant in Boy Scout affairs in New York. The planting of this tree in the National Historical Grove is further evidence of President Roosevelt's interest in conservation and scouting activities.

Regional Scout Executives from the entire country have been instrumental in securing trees which have increased the living monuments in the memorial grove to nearly two dozen. Scout Executive W. J. Anderson of Nashville, at the request of Harold W. Lewman, Regional Executive, sent the two Tennessee Presidential trees: one from The Hermitage, home of Andrew Jackson, and one from the yard by the log cabin in Greenville used by Andrew Johnson as a tailor shop.

The commemorative Texas trees were sent to Washington through the efforts of Regional Scout Executive James P. Fitch of Dallas and local leader Noel P. Amstead of Austin, who were given the trees by V. O. Weed of Austin and Tom Ball of Huntsville. Mr. Weed, a personal friend of Governor James S. Hogg, presented to the Scouts a tree grown from a pecan gathered at the grave of the man who asked that nut trees, rather than a marble memorial, be placed on his grave, and that the seeds be given to the children of Texas who would plant them to enrich and beautify their state. The pecan from the home of General Sam Houston is the descendant of a tree planted by the man who gave so much to Texas.

From Utah, Scouts under the leadership of Preston W. Pond sent a walnut seedling from Cache Valley where Jim Bridger, Peter Skeen Ogden and other fur traders and trappers made caches of furs and supplies.

Boy Scouts of Marion, Ohio, sent a walnut seedling from the home of President Warren Harding. Scout Executive Arthur Brooks cooperated with the head of that region, Dwight M. Ramsay, in obtaining the tree.

A walnut seedling from Arbor Lodge, Nebraska, the home of J. Sterling Morton and now a state park, was sent through the efforts of Regional Scout Executive Fred G. Davie and Frank O'Connell, secretary and warden of the Nebraska Game, Forestation and Parks Commission.

The tree from the Daniel Webster birthplace in New Hampshire was presented by B. K. Ayers in cooperation with Concord Scouts under the leadership of J. Hamilton Lewis and Regional Executive R. H. Nodine. Concord,

Massachusetts, Scouts sent a hickory seedling from the scene where the "embattled farmers stood."

The National Historical Grove, which was dedicated last fall by the veteran naturalist and scout, Dan Beard, is in a park on one of Washington's newer drives. Nearby is a clubhouse and play field, and the Anacostia River which skirts the drive is a haven for small craft. With the years the trees in this living memorial hall will achieve dimensions and nobility commensurate with their fame.

## MAKING LOG CABINS ENDURE

(Continued from page 265)

to twenty-four inches high and free from cracks are helpful, just as in preventing decay, and may be sufficient except in places where the termites are especially active. In using bricks, however, the mortar must be especially good or the termites will tunnel through it. In places where termites are very active they may, if undisturbed, build mud tunnels up over the foundation, or through it, until they can enter the wood above. Metal shields over the foundation and extending out from it seem to be impassable to termites and may be used just beneath the wood.

Peeled logs are somewhat less liable to decay than logs with the bark on but either kind may be used successfully. Bark harbors bark beetles and retards moisture evaporation. Once the logs are dry the bark does not favor dampness except where some faulty condition allows water to accumulate in the wood. The choice between peeled or unpeeled logs is largely a matter of personal preference but if logs with bark on are preferred some attention must be given to keeping the bark from loosening in patches and falling off. Perhaps the principal cause of this loosening is the activity of bark beetles. The adults of these insects lay their eggs within or just beneath the bark, usually when the logs are fresh cut. When the larvae hatch they make tunnels beneath the bark and if they are present in sufficient numbers the bark may fall off in great pieces. The best way to prevent such trouble is to cut the logs in the winter when insects are least active and then spray the bark on all sides with some toxic or repelling material that will keep the adult insects from depositing their eggs. A mixture of one-half coal tar creosote and one-half kerosene has been used with good effect.

Peeling the logs as soon as they are cut avoids the attack of bark beetles and other insects, but there are a few that will attack peeled logs, especially hardwood logs, after they become dry. The so-called powder-post beetles work in the sapwood of dry hardwood logs making numerous small holes. Sometimes they do considerable damage. They can be killed by applying suitable chemicals to all the affected parts.

Log cabins are seldom painted but oil, varnish, or other finishes are used on cabins built of peeled logs. They help prevent insect attack but they have little influence on decay.

Coatings of coal tar creosote applied to all surfaces before the logs are built into the cabin are effective, but they cannot be counted on to protect the wood very long under conditions that favor decay. Deep penetration of preservatives is necessary if good protection is required. Coatings of creosote applied after the structure is built are of little use in preventing decay for they do not reach the really vulnerable spots. The cost of thorough preservative treatment for all the logs in a cabin would be high, and the expense would not be justified. The most practical and economical procedure is to build correctly so preservative treatment is not needed.

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## THE BOY AND THE FARM WOODS

(Continued from page 267)

map should be on a scale of 100 or 200 feet to the inch. Second, set down various facts about the trees. Note the number of trees and their size—whether they are six inches in diameter or twelve inches or more. Spot the location of each tree on your map, or if the trees are too young and too close together, adopt a symbol indicating 'young reproduction.' There is a regular form for taking this information and any boy or girl writing to this department will be supplied a sample.

"Record all the tree facts for the entire area, or for an acre or half acre selected as the best sample area. By getting the heights of the trees, or the number of good sixteen-foot logs in a few average trees, it is possible by means of a table to find out how many board feet there are in the stand. A simple rule for getting the board feet in a log is to take one-quarter of the diameter in inches of the small end, subtract four, square the remainder and multiply by the length in feet of the log. Other observations that should be taken include kind of soil—sandy, gravelly, loam, or clay—number of standing dead trees, the presence of game and fire damage. You can add to the list.

"Now is the time for an interesting discussion with dad and your forestry adviser. What kind of returns do you want from the woods? You will have to decide this before making further plans or doing any work. Your decision should depend upon conditions of soil, market, climate, location, and personal wishes. It is possible to have game, birds, and timber, but in such a case the timber returns would be modified. For example, a policy looking toward timber returns only would involve the removal of snags or partly rotted trees, which are used by certain animals and birds as homes. Some trees with low timber value might bear fruit needed by animals. Because of the beauty or significance of some large or unusual tree you might wish to leave it, although good forestry practice would call for its removal.

"After a decision has been reached concerning wild life and timber, the kind of tree crop desired must be decided. This, of course, depends upon general conditions. Do you want to grow Christmas trees, or wood for pulp, fuel, ties, posts, poles, or lumber? It is sometimes possible to cut so as to have all of these products.

"When you have made your plans you can begin operations by doing some thinning or improvement cuttings. The first operation includes taking out the smaller and poorer trees, and the second consists of the removal of the large poor trees. Some of this material, if suitable, can be sold for ties, pulp, fuel, or even for lumber. At this time of low prices, cut only what you can sell or use.

## Winkenwerder Acting President of University of Washington

Dr. Hugo Winkenwerder, professor of forestry at the University of Washington, Seattle, has been appointed acting president of the University, following the resignation of Dr. M. Lyle Spenser, which becomes effective June 30.

Well known as a forester and as an educator, Dr. Winkenwerder has been associated with the University since 1909. Previous to that he served with the United States Forest Service and as an educator in a number of western colleges.

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## WHO'S WHO

Among the Authors in This Issue

HENRY S. GRAVES (*Comments on the Cope-land Report*) one of the foremost foresters in the world, is Dean of the Yale Forest School, at New Haven, Connecticut, and was formerly Chief Forester of the United States. He was also at one time President of The American Forestry Association.

WILSON COMPTON (*Comments on the Cope-land Report*) is secretary-manager of the National Lumber Manufacturers Association, Washington, D. C. Lawyer and economist, he has distinguished himself among the most thoroughly informed and practical minded authorities on the problems underlying national resource conservation of the industries dependent upon them and particularly the forest products industries.

JOSEPH S. DIXON (*Falcons of the Great Smokies*) is Field Naturalist for the National Park Service, with headquarters at Berkeley, California. Mr. Dixon is a graduate of Throop Polytechnic Institute, Pasadena, and has studied zoology at Stanford University and forestry at the University of California. From 1920 to 1931 he was Economic Mammalogist at the University of California. Mr. Dixon spends a great deal of his time studying the



Joseph S. Dixon

animal problems in the National Parks. His hobby is animal photography.

GEORGE M. HUNT (*Making Log Cabins Endure*) attended the University of California. Upon graduation in 1911 he immediately entered the Forest Service as a chemist in Forest Products. Mr. Hunt is at present in charge of Wood Preservation of the Forest Products Laboratory at Madison, Wisconsin.

EMERSON KNIGHT (*Forest Theatres*) is one of the foremost landscape architects and engineers in the West, having much to do with the trail systems of National and State Parks. He makes his headquarters at San Francisco.

CLAUDE M. KREIDER (*The Spell of the High Sierras*) went West at the age of sixteen and liked it so much that he is still living in California, at Long Beach. Having as his hobby mountain climbing, he spends a great deal of his time exploring. When not exploring or writing, Mr. Krieger is fishing for trout.

WAKELIN MCNEEL (*Forest Page for Boys and Girls*) is Assistant State Club Leader at the University of Wisconsin, with headquarters at Madison.

G. H. COLLINGWOOD (*Trees—Redeemers of the Tennessee*) is Forester for The American Forestry Association.

ERLE KAUFFMAN (*"Roosevelt"* — *Forest Camp No. 1*) is an Assistant Editor of AMERICAN FORESTS.



